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**Summary**

**Use of proceeds:** We confirm that the eligible projects for the use of funds derived from the bond issuance are well aligned with the Green Bond Principles 2018 (GBP 2018). The categories of eligible projects are: waste management and eco-efficient and/or circular economy adapted products, production technologies and processes, which are both in line with the GBP 2018 and have a positive environmental impact.

**Project evaluation/ selection:** In our view, the process of project evaluation and selection followed by the company in its Green Finance Framework (GFF) is in line with what is stated in the GBP 2018 and fully complies with what is expected from the market.

**Management of proceeds:** We confirm that the management of proceeds is in line with the GBP 2018 taking into account current state of green finance practices in Russia. The management of proceeds is characterized by handling the funds through a special account. The disposal of these funds will be carried out under the supervision of a special institution called the “Representative of Bond Owners” and in accordance with the intended purpose of the attracted green funding. In particular, the funds from the bond issue at hand will be allocated to a specific concession project in the Khanty-Mansiysk Autonomous Okrug (Russian region) for the creation and operation of a facility for processing, neutralizing and disposing of waste in accordance with the prospectus for issuing green bonds.

**Reporting:** The company plans to report on a quarterly and annual basis both in the areas of investment allocation and the general sustainability impact of these investments. The information, which will be reported regarding the use of proceeds includes the amount of investment, made and planned for each relevant project, and the description of each eligible project, as well as planned indicators of waste collection, waste disposal, recycling and the amount of goods produced from recycled materials. The company has also committed to periodically report the environmental impact of the projects through relevant environmental impact indicators, which we consider adequate and corresponding to the market standards.

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**Table 1. Green bonds issuer**

Name of the issuer	"RSB HMAO" Ltd.
Industry of the issuer	Waste management
Country of the issuer	Russian Federation
Credit rating (issuer) (national scale)	ruA-*
Credit rating (issuer) (international scale)	(Expert RA, Moscow) No
Name of the parent company	JSC "Waste Management"
Industry of the parent company	Waste management
Country	Russian Federation
Credit rating (pc) (national scale)	No
Credit rating (pc) (international scale)	No
ESG Rating	No

Source: RAEX-Europe based on data from the issuer, parent company and open sources

\*National scale of the Russian Federation

**Table 2. Green bonds issue**

Registration number	4-01-00428-R
Registration date	22.11.2018
Registration authority	Central Bank of Russia
Issuance date	19.12.2018
Country of the issuance	Russian Federation
Bond type (according to bond prospectus)	Documentary interest non-convertible bonds secured by cash claims
Bond type (according to green bond principles*)	Green project bond
Nominal value	RUB 1,1 bn
Maturity	12,5 years
Coupon	10%
Stock exchange	Moscow Stock Exchange (MOEX)
Green section of Stock exchange	No
Underwriter	Investment company "Leader"
Green bonds underwriter's experience	No
Presence of green finance framework	Yes

Source: RAEX-Europe based on data from the issuer, parent company and open sources

\* Second part's estimate

## 1 Introduction

"RSB HMAO" Ltd. is a subsidiary of JSC "Waste Management" whose main objective is "realization of investments in creation and operation of the waste management objects in accordance with the concession agreements signed with the regional governments of the Russian Federation"<sup>2</sup>. JSC "Waste Management" is a waste management company founded in 2011, which focuses on the creation and operation of systems for management of municipal waste. The company implements concession agreements for the creation of environmental technological parks for the waste treatment and disposal in several regions of the Russian Federation.

JSC "Waste Management" has implemented a Green Finance Framework (GFF) aimed at providing green bond issuance guidance for the whole group of companies from the holding, including branches and subsidiaries. The green bond will be issued through its subsidiary "RSB HMAO" Ltd. We are using the green financing framework from JSC "Waste Management", as it has been confirmed that the GFF presented by the parent company can be extended to all its subsidiaries and branches. The purpose of the GFF is developing common framework of funds rising and their usage for the environmentally oriented projects according to the goals and principles of the parent company. Green financing includes bonds, loans, and other external financing methods aimed at financing environmental projects in the following spheres:

1. Renewable energy;
2. Energy efficiency;
3. Waste management;
4. Sustainable water and wastewater management;
5. Environmentally efficient and/or adapted waste-free economy products, production technologies and processes.

## 2 Alignment with the green bond principles

In this section, we assess the alignment of the GFF provided by the parent company with the GBP 2018. At the same time, we assess the framework's credibility in respect to the company's description of every section.

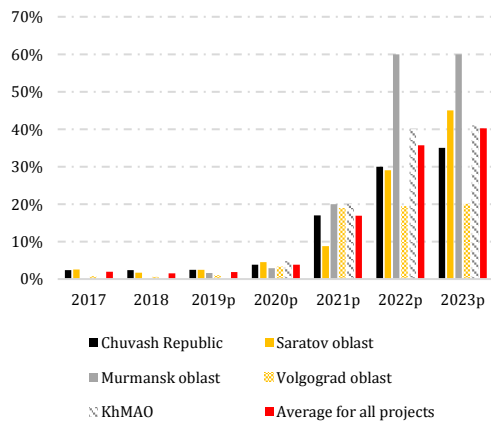
According to our bond issuance assessment, the eligible projects for the **use of funds** are well aligned with the GBP 2018. The categories are waste management and eco-efficient and/or circular economy adapted products, production technologies and processes, which comply with GBP 2018 and have a positive environmental impact. The parent company also confirmed that among the main objectives in regard to the waste landfill is closing the old landfills, which do not meet the requirements of the local

<sup>2</sup> <http://regoperator.ru/>

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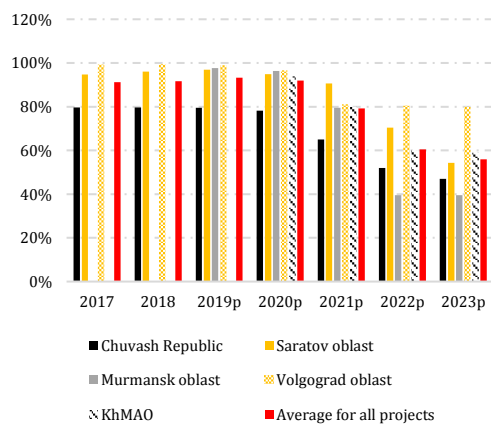
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**Graph 1:** Waste collection metrics for the projects, managed by the JSC “Waste Management”<sup>1</sup>, % of selected secondary mineral resources



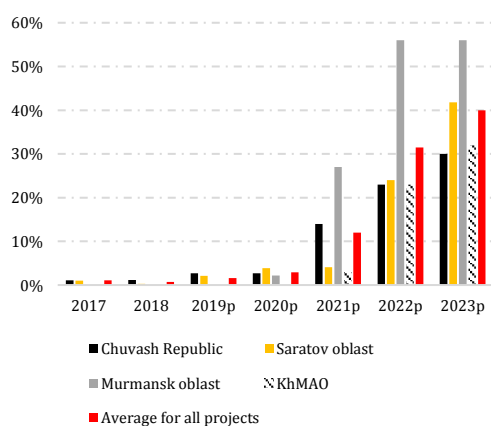
Source: RAEX-Europe based on data provided by the parent company. 2019-2023 – planned metrics.

**Graph 2:** Waste disposal metrics for the projects, managed by the JSC “Waste Management”, % of waste disposal



Source: RAEX-Europe based on data provided by the parent company. 2019-2023 – planned metrics.

**Graph 3:** Waste recycling metrics for the projects, managed by the JSC “Waste Management”, % of recycled waste



Source: RAEX-Europe based on data provided by the parent company. 2019-2023 – planned metrics.

environmental legislation on the availability of equipment and operating conditions and, as a result of those closures, prevent further accumulation of environmental damage to the environment - contamination of soil, water, air, health hazards as well as to reduce the volume of waste disposal at the landfill through the use of modern processing and disposal of waste, using the best available technologies and thereby minimize the negative impact on the environment.

**The process for evaluation and selection of projects** is also in line with the GBP 2018 guidelines. The company clearly defines the process through which the projects are selected. The approval of projects is the responsibility of the Green Investment Committee. This Committee includes the First Deputy CEO, CFO, Financial controller, Head of environmental department and an external independent environmental expert. The company also states in a transparent manner the eligibility criteria taken into account by the committee in order to approve or reject a project. These criteria include a specific roadmap for achieving certain environmental benefits in comparison with alternative project implementation options, certificates, examinations, licenses and other documents confirming compliance with certain environmental standards or requirements and conclusions (green opinions) on the project from the company's environmental management. Moreover, the company also states that the Green Investment Committee ensures that due diligence is also carried out on social matters, such as: conditions and protection of labor, social programs, and corporate relations. In addition, the company confirmed that the following criteria will be used in order to exclude the projects from the green financing: (1) the “nature” of the project is outside the designated specialization; (2) the project did not pass all stipulated approvals; (3) the project does not correspond to “the letter and spirit of the company’s public obligations”.

In our view, the process followed by the company complies with market expectations and local best practices. However, in order to comply with the global best practices the environmental sustainability objectives should have a clearer definition and quantitative metrics, so that international investors could clearly understand what are the goals and environmental impact of the eligible projects.

**The management of proceeds** is characterized by handling the funds through a special account. The disposal of these funds will be carried out under the supervision of a special institution called the “Representative of Bond Owners” and in accordance with the intended purpose of the attracted green funding. The company also clearly discloses that

<sup>1</sup> Graphs 1-3 show the waste management metrics (collection, disposal and recycling) for all facilities, managed by JSC “Waste Management” in different regions of Russia. JSC “Waste Management” has one facility per region, which is managed by the specific subsidiary.

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**Table 3:** Manufacturing of the production from the recycled materials for the projects, managed by the JSC “Waste Management”, tons of production (planned)

	2019	2020	2021	2022	2023
Paving slabs	1 768	5 670	6 804	6 940	7 079
Recultivated soil	-	-	3 960	116 108	187 021
Biocompost	308	8 215	15 226	15 975	15 554
RDF	-	-	-	3 958	32 200
Solid fuel	-	122	1 175	3 115	3 863
Liquid fuel	-	211	857	2 273	2 818

Source: RAEX-Europe calculations based on data provided by the parent company 2019-2023 – planned metrics.

unallocated funds will temporarily be managed in accordance with the generally accepted liquidity management policy of the company. In particular, the funds from the bond issue (Registration number 4-01-00428-R) at hand will be allocated to a specific concession project in the Khanty-Mansiysk Autonomous Okrug (Russian region) for the creation and operation of a facility for processing, neutralizing and disposing of waste in accordance with the prospectus for issuing green bonds. The company considers that assigning of the a “third party” auditor on the current stage of the project as well as taking into account the overall level of development of green finance industry in Russia, seems premature. However, the company confirmed, that such auditor can be assigned in the future. Moreover, as mentioned above, the external control on the management of proceeds will be performed by the independent body - “Representative of Bond Owners”. Therefore, we consider that the management of proceeds is in line with GBP 2018 taking into account the current status of green finance practices in Russia. The green practices in Russia significantly lag behind the global best practices and in this sense the company is even ahead of the local market standards.

The parent company is planning **reporting** on a quarterly and annual basis, both in the areas of investment allocation and the general sustainability impact of these investments. The information which will be reported regarding the use of proceeds includes the amount of investment made and planned for each relevant project, and the description of each eligible project (within the framework of existing confidentiality obligations), as well as planned indicators of waste collection, waste disposal, recycling and amount of goods produced from recycled materials (see graphs 1-3 and table 3). The parent company has also committed to periodically report the environmental impact of the projects through the relevant environmental impact indicators, which we consider adequate and corresponding to the market standards. Moreover, the parent company confirmed that it has plans to issue separate Sustainable Development reports as well as to assign external auditor for verification of such reports.

### 3 Environmental performance and governance

The mission of the parent company JSC “Waste Management” as well as all its subsidiaries stating that its activity “is aimed at solving environmental and economic problems in the sphere of municipal solid waste (MSW) management”<sup>3</sup> reflects the underlying engagement to improving and contributing to a green economy.

Creation and operation of socially significant facilities through the concession mechanism with involvement of long-term investments by

<sup>3</sup> <http://uo-system.ru/>

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non-state pension funds in the infrastructure of waste management is the key declared mission of the company. In addition, the parent company develops integrated systems for the treatment of waste. The parent company has shown its commitment to sustainability by developing environmental technology parks using the best available technologies to return secondary resources to the economy. "Improvement of the environmental situation, raising the level and quality of life of the population, improving the nation by solving environmental problems are part of the key declared goals of the company"<sup>4</sup>.

The parent company also supports the recommendations in the field of sustainable development and green investments, developed by the Concessionaires and long-term infrastructure investors National Association (CoLTI)<sup>5</sup>, which can be considered as the most reputable association in Russia in the sphere of sustainable finance and local long-term investments support. Moreover, the company developed and approved a Green Finance Frameworks as a part of a roadmap for implementing standards for sustainable development and green investment. Obtaining a Second Opinion regarding the compliance of the Company's Green Bonds documentation with the GBP 2018 confirms the company's intention to comply with best world practices.

We can confirm that the parent company is a leader in Russia in terms of the **technology used** for the waste management projects with the objective of reducing environmental damage such as the impact on soil and water bodies (potential contamination from the waste), air (biogas entering the air directly and as a result of fires on the test site), as well as human health (a consequence of the first two factors leading to the creation of unfavorable conditions for human life and health). In addition, the company is managing two R&D projects, which, in our opinion, have a strong positive effect on the waste management industry in Russia.

The parent company confirmed that all **transport vehicles** used for the waste collection and transportation, comply with the fuel environmental standard Euro-5, which can be considered as the most stringent in the Russian market. In addition, majority of the transport vehicles used by the parent company are produced in the EU and meet all the requirements and regulations of the European Union on the environmentally friendly production and equipment.

The parent company has a proven **track record** of waste management projects implementation in several Russian regions, which fully or partly contribute to the improvement of local environmental status. According to the parent company's statement, all implemented projects are aimed at

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<sup>4</sup> <http://uo-system.ru/o-kompanii>

<sup>5</sup> <https://investinfra.ru/nacionalnaya-associaciya-koncessionerov-i-dolgosrochnyh-investorov-v-infrastrukturu/>

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minimizing the environmental damage and are aimed at using technologies and equipment that minimize the impact on the soil and water bodies, air, human health. In addition, waste recycling facilities of the company have repeatedly been recognized as role-playing for the creation of similar objects in Russia.

The parent company, as well as its subsidiaries and implemented projects, have various **awards and special recognitions** on a national level. For example, the concession project of the Saratov branch of JSC “Waste Management” was registered as a best practice by the Agency for Strategic Initiatives and the Ministry of Construction and Housing and Communal Services of the Russian Federation in regards of the industry model of creating a comfortable urban environment and modernization of the public infrastructure. In 2017, JSC “Waste Management” presented a fertilizer produced at Engels (city in Russia) recycling complex in order to participate in the Russian “ECO BEST AWARD 2017” competition. The product “Compost Universal BIOVOLGA” was recognized as the best environmental product in the agro-industrial category JSC “Waste Management” and won in the nomination of “The best manufacturer of environmentally friendly products”. Apart from this, the parent company and all its subsidiaries passed through all necessary certification in accordance with the local environmental legislation of the Russian Federation.

However, in our view the company doesn’t have any **internationally recognized green or sustainable development certification**. Despite this, the company is considered as an industry leader in Russia and even the CIS region that indicates a room for future improvement.

The company has provided the qualitative metrics (actual and planned) (see graphs 1-3 and table 3) for all operating and planned projects for waste collection and recycling, however some other core indicators according to the “Suggested Impact Reporting Metrics for Waste Management and Resource-Efficiency Projects”<sup>6</sup> were not recorded and provided. In our opinion, this is considered as room for future improvement.

The parent company confirmed, that it uses as an environment and technological benchmarks the following companies from the USA: “Waste Management”<sup>7</sup> and “Rubicon”<sup>8</sup> (since the company considers the American model of the waste management (processing and disposal at landfills) the most applicable at the moment for the Russian market). The company regularly reviews quarterly and annual reports of both entities in the field of sustainable development and environmental safety. In the

<sup>6</sup> <https://www.icmagroup.org/green-social-and-sustainability-bonds/resource-centre/>

<sup>7</sup> <https://www.wm.com/us>

<sup>8</sup> <https://www.rubiconglobal.com>

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future, the company is planning to synchronize its performance on the waste collection and recycling.

The **due diligence** performed by the company for the implementation of every project is in line with our expectations with respect to environmental due diligence standards.

Starting from the first parent company's public annual report for 2013, the entity has been recording the value of energy resources (by different types) used by the company in operating activity. In addition, the section related to the parent company's contribution to the sustainable development was included to the 2017 annual report and in all quarterly reports for 2018. In addition, the company confirmed that it has plans to issue separate Sustainable development reports as well as to assign external auditor for verification of such reports. According to our opinion, this already shows the company's commitment to best **reporting practices**. However, in the future sustainable development section of the company's annual and quarterly reporting and/or separate report could be supplemented by structured quantitative metrics, and in the long run can be separated to the Sustainable Development Reports, based on the best market practices and Global Reporting Initiative (GRI).

The company has the following environmental and sustainable development targets for the implementation of the project linked to the proceeds of this **specific bond issuance** (4-01-00428-R):

- Create a positive environmental impact;
- Prevent air and water pollution;
- Biomass protection;
- Reduce the volume of waste disposal at the landfill due to the use of modern processing and disposal of waste, using the best available technologies;
- Increase the processing depth of MSW - maximizing the reuse of materials to be recycled and disposed of;
- Preventing environmental damage in the amount of more than RUB 28 m (estimated monetary value of the prevented damage);
- To process 100 000 tons of waste per year.

The full alignment with the Sustainable Development Goals (SDG) of the parent company as well as of the issuer is described in the section 5 (see below).

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#### 4 Risk exposure and mitigation

In our view, waste management projects are exposed to different environmental, social and governance risks (ESG) which could have negative material effect on the company, environment and society<sup>9</sup>:

**Table 4. ESG risks exposure and mitigation**

Type of risks	Risk mitigation actions and policies
<b>Environmental risks:</b>	
General risks of technological accidents at industrial facilities of the company (which can trigger environmental risks)	<ul style="list-style-type: none"> <li>• implementation of the internal procedures and regulations for each technological process*</li> <li>• implementation of the instructions on the operation with equipment*</li> <li>• labor safety procedures and regulations*</li> <li>• personnel training and certification of employees*</li> <li>• test and control measures for OHS*</li> <li>• emergency situations trainings*</li> </ul>
General regulatory ecological risks (non-compliance with the local requirements on environmental legislation)	<ul style="list-style-type: none"> <li>• presence of the Ecology Officer in the central office and in each subsidiary, who ensures that the company complies with all legal ecological requirements*</li> <li>• analysis of project initiatives*</li> <li>• participation in lawmaking negotiations and development of proactive measures in the company on legislative changes*</li> </ul>
Pollution of ground and water	<ul style="list-style-type: none"> <li>• appropriate project's location (far from any special protected water bodies)</li> <li>• creating a system for collecting and cleaning filtrate (polluted water)</li> <li>• observation wells to track the filtrate (polluted water)</li> <li>• implementation of technologies for composting residual waste of solid chemical waste and organic waste</li> <li>• use of local treatment facilities</li> <li>• use of recycled water</li> </ul>
Pollution from transport	<ul style="list-style-type: none"> <li>• use of transport vehicles complying with the best available environmental standards for the local market*</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• appropriate project's location (far from any special protected areas)</li> <li>• additional measures according to the local environmental regulation</li> </ul>
Air and CO2 emissions	<ul style="list-style-type: none"> <li>• technology of the waste disposal passes through multiple compaction with compactor rollers, which completely eliminate the formation of voids in the body of the landfill. This technology allows to eliminate the excessive formation of biogas</li> <li>• absence of large CO2 emission sources in the project</li> <li>• biogas generation monitoring system</li> <li>• minimization of air pollution through the "best available" technologies</li> <li>• implementation of technologies for composting residual waste of solid chemical waste and organic</li> </ul>
Counterparty risks <sup>10</sup>	<ul style="list-style-type: none"> <li>• bank guarantee on securing the obligations of the tender winners*</li> <li>• financial penalties in accordance with the contracts*</li> </ul>
<b>Social risks:</b>	
Labor practices	<ul style="list-style-type: none"> <li>• waste management training for all company's employees*</li> </ul>
Occupational health & safety (OHS)	<ul style="list-style-type: none"> <li>• occupational safety and working conditions according to local standards*</li> <li>• all people involved in the waste management operations have contracts with the company (no outsource human resources used)*</li> <li>• labor safety procedures and regulations*</li> <li>• personnel training and certification of employees*</li> <li>• test and control measures for OHS*</li> <li>• emergency situations trainings*</li> </ul>
<b>Governance risks* (for all entities within the group):</b>	
Consumer risks (disagreement of consumers with tariffs, charges, fines, arrangements for the return of arrears)	<ul style="list-style-type: none"> <li>• PR-activity related to local community</li> <li>• media coverage of the company's activity</li> <li>• special events on all company's projects with participation of the local authorities and consumers of the service</li> </ul>
Corporate structure risks <sup>11</sup>	<ul style="list-style-type: none"> <li>• financial, tax and accounting control on all company's branches and subsidiaries</li> <li>• legal control</li> <li>• operating control</li> </ul>
Legal risks	<ul style="list-style-type: none"> <li>• preliminary analysis of newly introduced regulatory legal acts</li> <li>• monitoring of all received appeals/complaints/letters from state bodies, municipal bodies, individuals and legal entities</li> <li>• monitoring of all supervisory actions in relation to the company's activities</li> <li>• monitoring of current administrative, legal and executive proceedings in relation to the company's activities</li> <li>• generalization of the established practice, identification of homogeneous legal compositions of violations in the implementation of the company's activities, drawing up a "risk matrix"</li> <li>• programming of measures aimed at reducing and preventing the occurrence of legal risks</li> </ul>
Reputational risks	<ul style="list-style-type: none"> <li>• PR-activity related to the local community</li> <li>• media coverage of the company's activity</li> <li>• special events on all company's projects with participation of local authorities and consumers of the service</li> <li>• monitoring of media regarding the company's activities</li> <li>• communication center in one of the company's facilities</li> <li>• communication with environmental non-government organizations and local ecological activists</li> </ul>

\* - Measures applicable for all projects, implemented by the group of companies.

<sup>9</sup> This assessment is based on the general industry risks of Waste management, risks specific for the company's key market (Russia) as well as the company's own assessment.

<sup>10</sup> In this case, counterparty risks are risks related to the waste-collectors and waste transportation companies which are not part of the group of the companies. This risk can be considered as a governance risk as well.

<sup>11</sup> In this case, corporate structure risks related to the risks of activities of the company's branches and subsidiaries.

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## 5 Impact of proceeds from the Green Bond issuance

As a result of the assessment, it was identified that the project for the construction of an integrated intermunicipal landfill for placement, disposal and processing of municipal solid waste for Nefteyugansk and Pyt-Yakh cities and the settlements of Nefteyugansk district of the Khanty-Mansiysk Autonomous Okrug (KhMAO) - Yugra (hereinafter - the Project) complies with the Green Bond Principles 2018 according to the following criteria:

- reduce greenhouse gas emissions;
- indirect reduction of greenhouse gas emissions by increasing the use of secondary raw materials;
- usage of alternative energy sources;
- resource saving.

As a result of the implementation of the Complex Waste Landfill construction project, the following positive environmental impacts in the area of waste management are expected:

- increase in the volume of wastes which are subject to organized disposal;
- higher proportion of sorted waste;
- lower emissions of pollutants entering the atmosphere;
- emissions reduction of pollutants entering the soil and water objects.

The volume of municipal solid waste (MSW) generated in KhMAO in 2017 was 541 146,9 tons. The designed capacity of the existing MSW landfills is 14 095 255,1 tons and currently accumulated waste in total is 8 098 674,7 tons, thus the polygons are 57,5% full.

Creation of a Complex Waste Landfill with a capacity of 90 000 tons/year and planned capacity of the landfill of 1 269 000 tons will increase the "life" of existing landfills and reduce the amount of waste entering unauthorized landfills. The estimated projected lifetime of the landfill is 14,1 years.

The total area of land resources currently used for placing MSW is 434 hectares. The area of existing and decommissioned but not eliminated landfills is 197,8 hectares. The area of the landfill projected within the Complex Waste Landfill is 10,2 hectares, which will reduce the area of land seized for unorganized waste disposal.

The volume of waste which is currently sorted in KhMAO is 14 350 tons/year. The entire volume of waste, which will be delivered to the projected Complex Waste Landfill, will be sorted, and this is in line with the target indicators of the waste management territorial scheme of KhMAO.

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The volume of secondary raw materials currently sorted in KhMAO is 430,5 tons/year. The Complex Waste Landfill is designed for the segregation of secondary raw materials in the amount of 14 250 tons/year, which is about 15% of the total waste coming to the Complex Waste Landfill. This corresponds to the target indicator of KhMAO for 2022 for the treatment of MSW.

According to the results of the research work “Inventory of emissions volume and absorptions of greenhouse gas on the territory of KhMAO-Ugra”<sup>12</sup>, the average annual volume of greenhouse gas emissions in the waste management sector for 2011-2016 amounted to 1,316 mln tons CO<sub>2</sub> eq. The design solutions applied at the Complex Waste Landfill allow using of BAT (best available technologies, waste sorting with the extraction of resource fractions and organic biodegradable materials, waste heat recovery), which will indirectly reduce greenhouse gas emissions by 1 953,835 tons/year CO<sub>2</sub> equivalent.

Thus, the reduction in the total GHG emissions in the “Waste” sector is expected at 0,15% per year, and the consumption of traditional fuels is also expected to decline due to the use of alternative sources (utilization of about 1000 tons/year of wood waste is provided in the Complex Waste Landfill boiler house).

Moreover, the use of BAT during the implementation of the Complex Waste Landfill project (installation of an impervious screen; preparation of waste for disposal - shredding, compaction, organized removal of biogas, purification of seepage and drainage water) will increase the proportion of waste, which is subject to organized disposal and, as a result, will reduce the amount of pollutants entering to the atmosphere, soil and water objects, including the groundwater.

Solutions for water resources recycling (recycling of seepage and drainage water) will reduce the level of consumption of natural waters.

Arrangement of a landfill insulation coating at the landfill closing stage will ensure a reduction of negative environmental impacts (reduction of pollutant emissions into the atmosphere, elimination of uncontrolled biogas emissions, reduction of seepage water) after ceasing the operation of the Complex Waste Landfill.

<sup>12</sup> <https://prirodnadzor.adhmao.ru/izmenenie-klimata/vybrosy-parnikovykh-gazov-v-yugre/rezultaty-nir/1627602/inventarizatsiya-obemov-vybrosov-i-pogloshcheniya-parnikovykh-gazov-na-territorii-khanty-mansiyskogo>

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## 6 Alignment of the eligible projects with the Sustainable Development Goals (SDG)

According to our opinion, the parent company's activity as well as the eligible projects are aligned with the following Sustainable Development Goals (SDG) (see Table 5):

**Table 5. Alignment of the eligible projects with the Sustainable Development Goals (SDG)**

SDG Goal	SDG Target	JSC "Waste Management" (parent company)	"RSB HMAO" Ltd (issuer)
<b>Clean water and sanitation</b>	6.3 Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.	<p>The parent company conducts tests of a low-temperature pyrolysis plant capable for processing sludge to produce liquid and solid fuels. In case of industrial application of this technology, this will not only reduce the areas currently occupied by sludge, but also direct it to the development of energy-efficient technologies and reduction of environmental damage in the production of fuel.</p> <p>At the moment, all accommodation facilities of the parent company are equipped with recycling facilities - waste sorting complexes, which allow semi-automatic sorting of commercially attractive MSW fractions that are prohibited by the legislation for placement at the landfill. In every facility from 20 to 25% of disposed waste could be reused thanks to these processing technologies. On the scale of the entire operational activity of the company, after commissioning of all currently built facilities, the total amount of waste prepared for secondary usage will reach 0,5 million tons. That means saved natural and material resources as well as costs for their production.</p> <p>Each facility of the company represents an eco-technology park - a production and infrastructure centre that within a single technological space unites suppliers of raw materials (secondary material resources and waste to be processed), processors (producers of waste products) and consumers.</p>	<p>Not applicable for the issuer.</p> <p>The waste sorting plant as part of the created facility will allow recycling more than 10 thousand tons of waste per year. The use of large-size waste as a fuel for a boiler house will also reduce the need for wood fuel (minimizing damage to the forest resources).</p>
	6.6 Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	<p>The opening of the intermunicipal landfills for the MSW (municipal solid waste) leads to the closure of several old, inappropriate to environmental standards, landfills and waste dumps as they cause environmental damage in the form of filtrate effluents and biogas emissions.</p>	<p>Thanks to the realization of financed project, two filled and non-compliant to the norms landfills of MSW (municipal solid waste) will be closed.</p>
<b>Affordable and clean energy</b>	7.3 Double the global rate of improvement in energy efficiency.	<p>A solid fuel boiler has been designed for large-sized wastes and operates in all facilities of the parent company. About 15% of the municipal solid waste incoming to the landfill is large-sized, including wood materials. The technology used in boilers allows the use of large-sized waste as fuel, while maintaining complete environmental safety. Solid fuel boilers have received all necessary expertise and certificates for the use of large-sized waste as fuel and applying the necessary purification systems of the resulting gas.</p> <p>The use of large-sized waste in the production activities allows saving natural resources (forestry) and reuse resources in secondary circulation. The applied technology also makes it possible to reduce the amount of waste buried at the landfill, to extend the life of the landfill, to reduce environmental damage from landfill activities, to reduce fuel consumption and fuel and lubricants for the processing of this waste and the emissions to the atmosphere.</p>	<p>Applicable for the project (see on the left side).</p>
<b>Sustainable cities and communities</b>	11.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	<p>The parent company operates in the following segments:</p> <ol style="list-style-type: none"> <li>1. Creation and operation of facilities for processing (sorting) and waste disposal;</li> <li>2. The organization of the collection and removal of MSW from the population and legal entities to accommodation facilities;</li> <li>3. Creating facilities for processing and production of final products from waste;</li> <li>4. Working as a regional MSW treatment operator in the region.</li> </ol> <p>In the latter case, the company assumes responsibility for the disposal of all municipal waste in the region;</p> <p>This implies: the development of an optimal scheme of facilities for processing, placement, disposal and recycling of waste, organization of logistics from waste products to utilizers, optimization of costs along the entire process chain in order to establish a reasonable tariff for consumers, use of the best technologies for waste management, prevention and elimination of unauthorized waste disposal in non-designated areas, promoting environmentally responsible attitude to waste.</p>	<p>The issuer intends to work in the following segments:</p> <ol style="list-style-type: none"> <li>1. Creation and operation of facilities for processing (sorting) and waste disposal.</li> <li>2. Creating facilities for processing and producing final products from waste.</li> </ol> <p>As part of its activities, the company will take an active part in the development and optimization of the waste management system in the region.</p>
<b>Responsible consumption and production</b>	12.4 Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and	<p>All projects of the parent company are aimed at minimizing environmental damage and are based on the use of technologies and equipment that reduce the impact on the soil and water bodies (potential ingress of waste filtrate), air (biogas entering the air directly and as a result of fires at the site), human health (a consequence of the</p>	<p>The KPI of the issuer's activities are described in the concession agreement:</p> <ul style="list-style-type: none"> <li>• Mass fraction of municipal solid waste disposed at the facility and not being a subject to further</li> </ul>

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significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

first two factors leading to the creation of unfavourable conditions for human life and health).

disposal, starting from the 2 (second) year of the Operational stage - 80% of the volume of waste received at the facility.

Creating an object for treatment, disposal and placement of waste for the needs of the cities of Nefteyugansk, Pyt-Yakh and settlements of the Nefteyugansk district will also allow to obtain the following effect:

- The created facility will provide conditions for closing two existing landfills for the disposal of MSW that have exhausted their resources and that do not comply with the environmental legislation.
- Prevention of environmental damage in the amount of more than RUB 28 m.

12.8 Ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

The parent company pays a special attention to the topics of interaction with the local community and disclosure the full range of information about the company's activities aimed at sustainable development. The company is interested in promoting the values used among its customers and the society.

Excursions are organized on a permanent basis to the company's facilities not only for the residents of the regions, but for everyone interested in order to demonstrate the operation of the facilities and the presentation of the technologies used.

A separate block of work is the organization of round tables at the facilities to improve the ecological culture, popularize the responsible waste management and reform the industry, further plans and prospects for the industry. Students of specialized higher educational institutions, ecologists, public organizations, officials participate in such forums. Over 7 years, more than 6 500 people have visited the company's concession facilities, including industry specialists and government officials from 60 regions of Russia, as well as specialists from 20 foreign countries.

All activities of the issuer are conducted in accordance with the company's general policy in the interaction with society.

The issuer organized several visits to the landfill for residents of the region to inform about the facility being created and to present key changes in the waste management system after the facility was commissioned.

In August 2018, a large-scale meeting was organized at the construction site with the participation of the Deputy Governor of the region, heads of municipalities, relevant district ministries, deputies of legislative assemblies, community activists, representatives of environmental parties and the media. During the meeting, plans were discussed for creating an environmental technology park on the basis of the facility, attracting local SMR (Secondary Material Resources) processors, and creating demand from the regional and municipal authorities for processing products. The project of the company is included in the priority list for the regional investment projects.

#### Additional information:

This Second Opinion was based on the analysis of the information provided by the bond issuer as well as by its parent company. The following information was used: Project documentation for the waste field (technical construction documentation); Conclusion of the expert commission of the state environmental review of the project documentation; Minutes of public hearings of the state environmental review; Legal act on approval of the conclusion of the expert commission of the state environmental review of project documentation; Territorial planning scheme of Khanty-Mansiysk Autonomous Okrug; The license for subsoil use; Expert opinion on the results of sanitary-epidemiological expertise; Territorial waste management scheme of the Khanty-Mansiysk Autonomous Okrug; Project presentation and passport; Green finance framework and questionnaire filled in by the company; Prospectus of the bond issue; Official decision to issue securities (bonds); Presentation of the bond issuer; Financial statements of the issuer (RAS); Financial statements of the issuer (IFRS); Annual and quarterly reports of the parent company; open sources and media information.

The analysis was performed by the employees of the Rating-Agentur Expert RA GmbH (Frankfurt am Main, Germany):

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The additional analytical support for Point 5 (Impact of proceeds from the Green Bond issuance) was provided by the group of companies "Shaneco"<sup>13</sup> ("Shaneco Design Institute") (Moscow, Russia), represented by the following employees:

- Alexander Ryabenko, Deputy Director General;
- Anna Kurchakova, Chief Project Engineer;
- Alexey Emmanuilov, Chief Specialist;
- Malakhaev Dmitry, II category engineer.

<sup>13</sup> <http://www.shaneco.ru/eng/>

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