# Ministerstwo <br> Kultury i Dziedzictwa Narodowego 

Podsekretarz Stanu
dr hab. Magdalena Gawin

Warsaw, 28 April 2017
BM-WO.6480.1.2017.RD

Mrs Mechtild Rössler<br>Director<br>UNESCO World Heritage Centre

Subject: State of Conservation of the World Heritage property Wieliczka and Bochnia Royal Salt Mines (Ref. C 32ter)

## Dear Madam,

In response to the ICOMOS Technical Review (CLT/HER/WHC/8514/PLVAS/MR) submitted on December 22, 2015 and containing an evaluation of the Report on the state of conservation of the UNESCO World Heritage property of March 30, 2015 (prepared in response do decision 37.COM 8B.41), I would like to submit a report on the state of conservation of the Wieliczka and Bochnia Royal Salt Mines as the World Heritage Site.

Please accept, Madam, the assurances of my highest consideration.


Appendices:
1.Report on the state of conservation of the UNESCO World Heritage property, Wieliczka and Bochnia Royal Salt Mines, (Poland) Ref. C 32ter)

Cc:

1. Permanent Delegation of the Republic of Poland to UNESCO
2. Monuments Preservation Department of the Ministry of Culture and National Heritage
3. Polish National Commission for UNESCO
4.Focal Point for World Heritage

## Report on the state of conservation of the UNESCO World Heritage property Wieliczka and Bochnia Royal Salt Mines, (Poland) (Ref. C 32ter)

## 1. Executive Summary of the report

The report has been drawn up in response to the ICOMOS Technical Review (CLT/HER/WHC/8514/PLVAS/MR) submitted on December 22, 2015 and containing an evaluation of the Report on the state of conservation of the UNESCO World Heritage property of March 30, 2015 (prepared in response do decision 37.COM 8B.41). The current report was prepared on the basis of information received from the administrators of Kopalnia Soli "Wieliczka" Spółka Akcyjna (the Wieliczka Salt Mine - a joint-stock company) and Kopalnia Soli Bochnia Sp. z o.o. (the Bochnia Salt Mine - a limited liability company) as well as from the municipal authorities of the town of Bochnia.

The ICOMOS Technical Review shows that the responses provided by the State Party with respect to the individual items of decision 37. COM8B.41: 4a (Clarifying and specifying the extent of the subsurface and connecting shafts forming the Wieliczka mine; provide an adequate map to show the extent and area of the mine), 4d (Providing a better description of the safety plan with regard to the operation of the tourism activity), 4 f (Paying particular attention to the risks of flooding at the Bochnia mine, bearing in mind a possible increase in torrential rain as a result of climate change), 4 g (Stating the monitoring used for the underground electrical and mechanical systems at the Bochnia mine, and provide details about the emergency evacuation plans) are sufficient and do not require any additional information to be provided.

The State Party submits a translated version of the agreement concluded between the administrators of the individual components of the property dated December 16, 2014 as well as an annex to the said agreement made as a result of personnel changes, signed on May 24, 2016. In order to supplement the materials submitted at an earlier stage, the State Party hereby provides detailed information on the following issues:

- the spatial development plans for the town of Bochnia;
- the measures intended to protect the Bochnia Salt Mine, a component of the UNESCO World Heritage property, against humidity;
- the procedures and scope of protective works and measures designed to increase site accessibility implemented or contemplated within the framework of the continued works carried out at the Wieliczka Salt Mine, a component of the UNESCO World Heritage property.


## 2. Response to the Decision of the World Heritage Committee

The report has been drawn up in response to the ICOMOS Technical Review (CLT/HER/WHC/8514/PLVAS/MR) submitted on December 22, 2015 and containing an evaluation of the Report on the state of conservation of the UNESCO World Heritage property of March 30, 2015 (prepared in response do decision 37.COM 8B.41). The current report was prepared on the basis of information received from the administrators of Kopalnia Soli "Wieliczka" Spółka Akcyjna (the Wieliczka Salt Mine - a joint-stock company) and Kopalnia Soli Bochnia Sp. z o.o. (the Bochnia Salt Mine - a limited liability company) as well as from the municipal authorities of the town of Bochnia.

In the course of its 37th session in Phnom Penh, the World Heritage Committee adopted decision no. 37. COM 8B.41, which reads as follows:

The World Heritage Committee,

1. Having examined Documents WHC-13/37.COM/8B, WHC-13/37.COM/INF.8B1 and WHC-13/37.COM/INF.8B4,
2. Approves the extension of the Wieliczka Salt Mine to include the Bochnia Salt Mine and Wieliczka Saltworks Castle, and thus become the Wieliczka and Bochnia Royal Salt Mines, Poland, on the basis of criterion (iv);
3. Adopts the following Statement of Outstanding Universal Value:
[...]
4. Recommends that the state Party give consideration to the following:
a) Clarifying and specifying the extent of the subsurface and connecting shafts forming the Wieliczka mine; provide an adequate map to show the extent and area of the mine;
b) Confirming the setting up of the Monitoring and Coordination Team for the property which was recently announced; specify its composition, its human and material resources and how it will function in practice;
c) Paying particular attention to the control of urban development in the buffer zone, in the vicinity of Wieliczka Saltworks Castle, and for the development of the "Pole Campi" at Bochnia, and keep the World Heritage Committee informed, in accordance with paragraph 172 of the Operational Guidelines for the Implementation of the World Heritage Convention;
d) Providing a better description of the safety plan with regard to the operation of the tourism activity;
e) Strengthening the study and monitoring of the risks associated with humidity affecting the underground structure and the sculptures of the Bochnia mine, particularly in view of the high level of tourist visits and the development of the spa;
f) Paying particular attention to the risks of flooding at the Bochnia mine, bearing in mind a possible increase in torrential rain as a result of climate change;
g) Stating the monitoring used for the underground electrical and mechanical systems at the Bochnia mine, and provide details about the emergency evacuation plans;
h) Paying greater attention in the case of architectural restorations and of technical historical reconstructions, to inaccurate reconstructions and the risk of over-interpretation of existing remains.

## Response from the State Party to the World Heritage Committee's Decision, paragraph by paragraph

4a Clarifying and specifying the extent of the subsurface and connecting shafts forming the Wieliczka mine; provide an adequate map to show the extent and area of the mine.

Having become acquainted with the ICOMOS Technical Review, the State Party concludes that the information provided in the Report on the state of conservation of the UNESCO World Heritage property of March 30, 2015 is sufficient and does not require any further supplementations.

4b Confirming the setting up of the Monitoring and Coordination Team for the property which was recently announced; specify its composition, its human and material resources and how it will function in practice.

The State Party submits the translation of an agreement confirming the establishment of the Coordination and Monitoring Team for Wieliczka and Bochnia Royal Salt Mines, the UNESCO World Heritage property, which was concluded between the entities responsible for the management of the components of the property, namely the

Cracow Saltworks Museum in Wieliczka, Kopalnia Soli "Wieliczka" S.A. (the "Wieliczka" Salt Mine Company, a joint-stock company) and Kopalnia Soli Bochnia sp. z o.o. (the "Bochnia" Salt Mine Company, a limited liability company) on December 16, 2014, as well as of the annex to the said agreement concluded on May 24, 2016.

The Team has been established in order to define the framework for cooperation with respect to the protection and preservation of the Outstanding Universal Value of the cultural property. The Partners have undertaken to become involved in the relevant works and to notify each other on any activities which may potentially have an impact on the site. In the course of regular meetings between the representatives of individual components of the property, issues pertaining to the protection, management and maintenance of the property are being discussed; where necessary and where the available human, financial and technical resources of each individual administrator so allow, specific persons are assigned responsibility for individual issues and provided with information on the resources which may be used for such purposes.

Appendix 1. Agreement concluded between the administrators of individual components of the property dated December 16, 2014
Appendix 2. Annex to the agreement between the administrators of individual components of the property, concluded on May 24, 2016.

4c Paying particular attention to the control of urban development in the buffer zone, in the vicinity of Wieliczka Saltworks Castle, and for the development of the "Pole Campi" at Bochnia, and keep the World Heritage Committee informed, in accordance with paragraph 172 of the Operational Guidelines for the Implementation of the World Heritage Convention.

## Vicinity of Wieliczka Saltworks Castle

The State Party hereby informs that its responses provided in the previous report remain fully up-to-date. The buffer zone of the Wieliczka Saltworks Castle is protected pursuant to the Act on the protection and guardianship of monuments (2003) as a fragment of the urban layout of the historical town of Wieliczka, entered into the Register of Monuments (A-447, dated 22.06.1977). Any conservation, renovation, construction or other similar works may therefore only be performed with the permission of the Regional Monuments Inspector.

An up-to-date local spatial development plan exists for the entire area of the castle buffer zone. According to the plan, the area in question is afforded direct protection of the monuments protection officer.

At the present stage, no significant construction or renovation works, or any changes in spatial planning which may potentially have an impact on the Outstanding Universal Value of the World Heritage property, are contemplated in the buffer zone of the Saltworks Castle.

## "Pole Campi" at Bochnia

At the present stage, the Study of the condition and directions of spatial development for the Town and Commune of Bochnia is in the process of being prepared. The procedure in question is performed on the basis of the Act on spatial planning and land development. The document which is currently being prepared incorporates all guidelines which stem from separate provisions, including the provisions of the Act on the protection of monuments and the guardianship of monuments, with particular emphasis on those provisions which pertain to properties, sites and zones covered by any conservation or archaeological policies, along with the areas covered by the entries on the UNESCO World Heritage List and the buffer zones thereof. The municipal authorities have made an unambiguous declaration that they shall refrain from any investments which may pose a threat to the Bochnia Salt Mine - a component of the World Heritage property.

The area of the buffer zone of the component of the UNESCO World Heritage property, including the area around the Campi Shaft, are covered by a local spatial development plan for the "Śródmieście" (Town Centre) district of Bochnia, adopted by way of a Town Council resolution no. XVII/174/08 dated February 27, 2008.

The following planning procedures for the town of Bochnia which cover the component of the World Heritage property and/or the buffer zone thereof are currently being implemented:

- A local (minor) change in the aforementioned spatial development plan for the "Śródmieście" district pertaining to 9 locations, including the Market Square and the Planty Salinarne Park (resolution of the Bochnia Town Council no. VI/45/15
dated March 26, 2015, amended by the Bochnia Town Council resolution no. XIV/114/15 dated November 26, 2016). The change in question was intended to ensure the uniformity of the provisions of the current spatial development plan as well as to reinforce the protection of the saline heritage of Bochnia. The local change of the plan referred to above was made, inter alia, on the basis of arrangements made with the Regional Monument Inspector and contains provisions and markings pertaining to the buffer zone.
- A local (minor) change in the local spatial development plan for the "Śródmieście" district pertaining to three plots of land on which the Bochnia Town Council building is located - Town Council resolution no. XVII/154/16 dated February 25, 2016. The change of the aforementioned plan was intended to introduce modifications of certain parameters - the coefficients which determine development density as well as the required surface of green areas. The change in question is being implemented in order to adjust the Town Council building to the needs of disabled persons; it is being made, inter alia, on the basis of arrangements made with the Regional Monument Inspector, with both the textual and graphic parts thereof set to include provisions and markings pertaining to the buffer zone.
- Draft spatial development plan for the "Krzęczków-Oś św. Jana" housing estate Bochnia Town Council resolution no. XXXV/361/13 dated October 31, 2013; the textual and graphic parts of the aforementioned plan include information and markings pertaining to the buffer zone. The draft has been consulted, inter alia, with the Regional Monument Inspector.
- Draft spatial development plan for the "Łychów - Brzeźnicka" area - Bochnia Town Council resolution no. XXIV/251/12 dated November 29, 2012, amended by resolution no. XXXIV/352/13 dated September 26, 2013. The textual and graphic parts of the aforementioned plan include information and markings pertaining to the buffer zone. The draft has been consulted, inter alia, with the Regional Monument Inspector.


#### Abstract

4d Providing a better description of the safety plan with regard to the operation of the tourism activity;

Having become acquainted with the ICOMOS Technical Review, the State Party concludes that the information provided in the Report on the state of conservation of the UNESCO World Heritage property dated March 30,2015 is sufficient and does not require any supplementations to be made.


4e Strengthening the study and monitoring of the risks associated with humidity affecting the underground structure and the sculptures of the Bochnia mine, particularly in view of the high level of tourist visits and the development of the spa;

The State Party hereby declares that the degree of humidity at the Bochnia salt mine is being monitored on an ongoing basis. The issue of air humidity at the mine is not caused by an excessive number of tourists, but is primarily the result of the significant temperature differences between the surface and the underground sections of the mine during summer months. The monthly measurements of ventilation parameters (including air humidity measurements taken at the measurement units inside the mining corridors) clearly demonstrate that the increase of air humidity depends exclusively upon atmospheric conditions on the surface. Efficient dehumidifying mechanisms have practically eliminated the risk of damage to the underground saline structures.

In 2006, a dehumidifying station designed to process the air flowing into the mine was constructed alongside the Trinitatis air inlet shaft in order to counteract the consequences of outdropping of water (condensation) inside the underground corridors of the mine. The dehumidifying station comes equipped with devices which perform constant measurements of air humidity, both before and after the dehumidifying operations are performed. The measurement results are monitored by the mine administrator on an ongoing basis.

The control system which governs the operations of both the main ventilators and the dehumidifying station which works alongside these ventilators was modernised in years 2013/2014. At the present stage, the quantity of air which flows into the workings is controlled remotely, with seamless changes to the air flow designed to ensure that air humidity is kept to a minimum. The conceptual and design works pertaining to the
modernisation of the existing dehumidifying station in order to increase the efficiency thereof and to ensure its adjustment to the current air temperature and humidity parameters are scheduled to complete by the end of 2016.

The operations of the sanatorium located in the underground chambers of the mines focuses on movement and respiratory rehabilitation and does not require the use of any equipment (i.e. bath tubs, inhalers) which could form a source of humidity; for the above reasons, these activities pose no threat whatsoever to the underground structures.
$4 f$ Paying particular attention to the risks of flooding at the Bochnia mine, bearing in mind a possible increase in torrential rain as a result of climate change.

Having become acquainted with the ICOMOS Technical Review, the State Party concludes that the information provided in the Report on the state of conservation of the UNESCO World Heritage property dated March 30, 2015 is sufficient and does not require any supplementations to be made.

4 g Stating the monitoring used for the underground electrical and mechanical systems at the Bochnia mine, and provide details about the emergency evacuation plans.

Having become acquainted with the ICOMOS Technical Review, the State Party concludes that the information provided in the Report on the state of conservation of the UNESCO World Heritage property dated March 30, 2015 is sufficient and does not require any supplementations to be made.

4h Paying greater attention, in the case of architectural restorations and of technical historical reconstructions, to inaccurate reconstructions and the risk of overinterpretation of existing remains.

As a supplement to the previously provided materials, we hereby submit detailed information on the procedures and scope of protective works and measures designed to increase site accessibility implemented or contemplated within the framework of the continued works carried out at the Wieliczka Salt Mine, a component of the UNESCO World Heritage property.

The systematic implementation of the works in question first began in the 1980s, with the works in question having been systematically performed ever since. The nature
of the location requires a wide range of systematic, long-term works to be performed in order to ensure that the property is properly safeguarded. One may expect the works referred to as the implementation of the tasks intended to ensure that the Wieliczka Salt Mine attains its ultimate shape will last at least until the year 2030.

The basic scope of works performed by the "Wieliczka" Salt Mine Company is the performance of mining operations intended to ensure the proper maintenance of historic workings, within the scope specified in the document entitled "Target technical condition of the Wieliczka Salt Mine", prepared in February 2011, and implemented in accordance with the conservation recommendations issued by the Regional Monument Inspector in Kraków on June 8, 2010, and pertaining to the performance of mining operations as well as conservation and restoration works inside the workings located in the area covered by the entry in the Register of Monuments pertaining to the historic salt mine in Wieliczka. The contents of the conservation recommendations are as follows:

1. The "Wieliczka" Salt Mine in Wieliczka (hereinafter referred to as "the Mine") is a mining facility within the meaning of article 6.7 of the Geological and Mining Law of February 4, 1994 (consolidated text - Dz. U. [the Journal of Laws] for 2005, no. 228, item 1947, as amended); the protection of the historical structures contained therein, specified in the "Schedule of historical workings..." ${ }^{1}$, requires the performance of a wide range of specialist mining operations intended to ensure the technical safety of the Mine, in the course of which the provisions of the aforementioned Geological and Mining Law must be applied, while also having regard to the provisions of the Act of on the protection and the guardianship of monuments (consolidated text - Dz. U. [the Journal of Laws] no. 162, item 1568, as amended).
2. The liquidation or excessive transformation of workings included in the "Schedule of historical workings..." which are subject to historical monument protection policy or performing any actions likely to cause damage to such workings is unacceptable, save for cases justified due to reasons of mining safety.

[^0]3. When performing mining operations intended to secure the workings included in the "Schedule of historical workings...", it is necessary to strive towards the preservation of the original substance and form of such workings to the fullest extent possible while at the same time taking into account the provisions of the aforementioned Geological and Mining Law and the Act on the Protection and Guardianship of Monuments.
4. When performing mining operations intended to secure the workings which are covered by a historical monument protection policy, i.e. the workings included in the "Schedule of historical workings...", the historical names of levels, drifts, chambers, sloping shafts, cross-drifts, shafts and small shafts and other workings should be preserved or restored, while the needs pertaining to the protection and conservation of the sculptures and reliefs as well as machinery, equipment and mining tools located therein must always be taken into consideration.
5. The preparation of the design documentation for protective works to be performed inside workings included in the "Schedule of historical workings..." (with the exception of works which do not interfere with the historical substance and form thereof) shall be preceded by a historical and conservation study which must contain conclusions as to the scope and method of historical monument protection.
6. Protective works inside workings included in the "Schedule of historical workings..." shall be performed in strict compliance with the design documentation or conservation works programmes approved by the Regional Monument Inspector of the Małopolska Region and on the basis of the authorisations issued by the Regional Monument Inspector. The protective works shall be performed either by the Mine itself or by specialised mining companies. Conservation works performed on sculptures, reliefs or other works of art or craft which are located inside the workings shall be performed by certified art restorers. Conservation works encompassing machinery, equipment and mining tools shall be performed by persons specialising in the given field.
7. Having regard to circumstances related to mining operations as well as to the needs of public safety, occupational health and safety and environmental protection, certain ad-hoc, urgent protective works may be performed inside the workings listed in the "Schedule of historical workings..." at the request of a commission appointed
by the President of the State Mining Authority, at the request of the Regional Office of the State Mining Authority in Kraków or of other authorities as well as at the request of the Management of the Mining Facility, on condition that the place, scope and time of such works shall be immediately notified in writing to the Regional Monument Inspector of the Małopolska Region. In case of mining operations or conservation works which had been planned previously, a request for consultations with respect to applicable documentation as well as a request for the performance of the works in question must in each case be filed with the Regional Monument Inspector of the Małopolska Region.
8. The scope of mining operations performed in other workings located within the area covered by the entry in the Register of Monuments pertaining to the "Wieliczka" Salt Mine (i.e. those workings which are not listed in the Schedule referred to above) shall be aimed at ensuring the technical maintenance of historical structures included in the "Schedule of historical workings at the Wieliczka Salt Mine earmarked for preservation".
9. It is assumed that the basis for the performance of mining operations in the remaining workings which are not listed in the "Schedule of historical workings..." shall be the mining facility liquidation programme, encompassing, in particular, actions intended to secure the historical sections of the "Wieliczka" Salt Mine specified in article 5.1.2.a) of the Act on subsidies for certain entities of February 17, 2006 (Dz. U. [the Journal of Laws] no. 64, item 446, as amended), approved by the Regional Monument Inspector of the Małopolska Region.

The works necessary to attain the so-called target condition of the Mine have been listed in a document known as "Target technical condition of the "Wieliczka" Salt Mine" which is intended to ensure that the historical workings are safeguarded and maintained in an optimum condition. The necessary mining works intended to ensure the protection of workings which are earmarked for preservation have been laid down in the aforementioned conservation recommendations. The document entitled "Target technical condition..." has been approved by the Regional Monument Inspector of the Małopolska Region in Kraków. However, the document in question does not specify the timetable and deadline for the works to be performed, focusing instead on the objectives
and scope of actions necessary to achieve the designated target. Due to the large scale and nature of the tasks which must be performed in order to attain the target technical condition, the entire process is completed in stages, based on multiannual works programmes and detailed annual plans.

It needs to be pointed out that, due to the nature of the property - the Wieliczka Salt Mine - mining works inside the Mine must always be performed in accordance with the provisions of the Geological and Mining Law. Under these provisions, the performance of mining works inside the Mine is supervised by mining supervision authorities.

In the course of performance of tasks intended to attain the target condition of the "Wieliczka" Salt Mine, in years 2011-2015 alone the "Wieliczka" Salt Mine Company performed the following operations:

- liquidation of approx. 560 thousand $\mathrm{m}^{3}$ of workings,
- repair of mining damage in 41 facilities,
- protective works and measures intended to prevent the dangers associated with the liquidated mining facility, encompassing approx. 100 different tasks in total,
- protective works in historical workings covering 59 chambers and galleries, shafts and small shafts. The operations in question encompassed, in particular, works which made it possible to maintain underground chambers and galleries in the area of the tourist route which had been made available to tourists from the 19th century, as well as the newly opened workings in the area of the so-called "Mining Route", "Underground Mysteries Route" and the multimedia exhibitions in the Lill Górna and Kazanów chambers,
- a total of 302 technical documentations, studies and analyses of the works performed have also been prepared, in addition, the works in question encompassed the disposal of $120 \mathrm{~m}^{3}$ of saltwater leakage flowing into the mine per annum.

The total cost of the works in question amounted to PLN 518.8 million.
The works have been performed on the basis of works programme for the period until the year 2013 as well as on the basis of the currently implemented "Programme for the complete liquidation of non-historical part of the Wieliczka mining facility, forming part of the liquidation of a part of the Wieliczka Salt Mine, as well as for the maintenance,
protection and preservation of the historical section of the Wieliczka Salt Mine forming part of the property the "Wieliczka" Salt Mine Company for years 2014-2010" and on the basis of detailed annual plans.

At the present stage, the Programme for years 2014-2020 is being implemented following the approval thereof by the Minister of Economy and the Regional Monument Inspector of the Małopolska Region in Kraków. The cost of works specified in the Programme and planned for implementation over a 7 -year timespan is over PLN 950 million. This cost will mostly be covered from public resources, the majority of which will come from a budget subsidy, subject to the conditions laid down in the provisions of applicable laws. For example, the Plan of works for year 2016 provides for the financing of the tasks specified therein on the basis of the following resources:

- budget subsidy in the amount of PLN 75.0 million,
- proceeds from liquidation (mostly from the sale of salt obtained in the process of brine disposal - PLN 1.9 million,
- own funds of the Mine - PLN 3.1 million,
- subsidies from the National Fund of Environmental Protection and Water Management in Warsaw (subsidies for the implementation of 8 projects) - PLN 16.8 million.

Another crucial aspect of the works performed is the need to ensure compliance with environmental protection rules and to counteract potential mining disasters which pose a significant risk to people and the environment alike. For the above reason, the Mine undertakes steps intended to protect the environment and prevent mining disasters in the course of the protective works performed. In order to achieve this goal, the Mine obtains funds from subsidies granted by the National Fund of Environmental Protection and Water Management in Warsaw as well as European Union subsidies. The funds from the National Fund of Environmental Protection and Water Management are earmarked for the protection of the surface area above the mine as well as of underground and surface waters against the detrimental consequences of mining tunnel collapse. In the course of these projects, it has been possible to secure, among others, the historical underground chambers of Michałowice, Gołuchowski and Witos Górna. Works are now underway to ensure the protection of the Geramb, Saurau, Wessel and Margielnik chambers.

The funds allocated by the EU have made it possible to implement the project designated as "New Adventure Trials in the Historic Wieliczka Salt Mine", with over 27 historical galleries and stopes, a small shaft located on levels I-III as well as the historical Regis shaft and its shaft-top all being secured. The availability of EU funds has also made it possible to implement a project thanks to which the historical chambers of Lill Górna and Kazanów, located on the second lower level were opened to visitors.

The Programme for years 2014-2020 provides for further works intended to attain the target technical condition of the historical salt mine; under this programme, the following works are scheduled to be performed in years 2014-2020:

1. liquidation of $1 \mathbf{1 3 5 . 9}$ thousand $\mathrm{m}^{3}$ of workings, the existence of which poses a major threat to the continued existence of historical workings; the disused workings will be filled with backfilling materials. In addition, risks related to water action and tunnel collapse inside the mine will also be significantly reduced through sealing the workings which intrude into the northern boundary of the salt deposit (liquidation of 30.9 thousand $\mathrm{m}^{3}$ of workings by filling them with sealing materials), including the liquidation of 845.3 metres of boreholes connecting the workings with the surface.

The main method used for the purposes of liquidation of workings shall be hydraulic backfill. In addition, pneumatic backfill, dry backfill and injection grout will also be used to a limited extent in the process of liquidation of underground workings, with injection grout allowing for complete sealing of the tunnels. Some of the workings will be sealed by filling them with diggings obtained in the course of operating aimed at modifying and securing the existing workings. The hydraulic backfill method encompasses the transportation of sand on the surface, the deposition thereof inside underground workings using hydrotransport, the pumping of brine drained from the backfill, conservation and maintenance of backfill installations, preparatory works (construction of backfill dams, pipelines, sumps, drilling backfill and technological openings) as well as maintenance of workings. The backfilling process involves the preparation on the surface of a mixture of sand and saturated brine, using a backfill pipeline to ensure the gravitational flow thereof into the liquidated workings, draining
the brine from the sand filling the workings and recirculating the brine back into the backfill pipeline system.

There are also plans to use dry backfill which shall be useful in case of workings located next to the northern boundary of the salt deposit as well as in regions where historical tunnels and chambers are numerous; the use of hydraulic backfill in such areas would not be possible due to the difficulties in containing the brine drained from the backfill. The liquidation of workings using dry backfill involves filling the tunnel with sand directly from the surface using a special backfill borehole or specialised feeders and pipe networks constructed inside the mine.

Another method which may be used for the purposes of liquidation of underground tunnels is injection grouting, which is mostly used for sealing end sections of workings which intrude into the northern boundary of the salt deposit, beyond which the waterbearing Chodenice layers are located. This technology utilises loam and cement slurry produced on the surface using alkaline binder, cement and brine. Next, the slurry is transported into the liquidated sections of workings, blocked off using isolation dams, using a network of injection pipelines leading down the "Kościuszko" shaft and through galleries, sloping shafts and boreholes connecting individual levels. The same method is used for the purposes of liquidation of workings where further rock mass subsidence underneath the most valuable historical structures is not permissible.

According to the assumptions contained in the Programme for years 2014-2020, the total cost of the aforementioned tasks will be in excess of PLN 117 million.
2. performing protection works inside historical workings forming part of the 218 chambers and 190 drift and stope complexes earmarked for preservation once the target technical condition of the mine is attained, in accordance with the recommendations issued by the Regional Monument Inspector of the Małopolska Region.

The tasks earmarked for implementation in the schedule of works intended to secure the historical sections of the mine, renovation works to be performed inside historical workings and on historical machinery and equipment in the years 2014-2020 are presented below, grouped into aggregated items containing comprehensive projects performed inside the historical section of the mine:

- Restoration of the underground workings in the Cristal Grottos - the performance of works under this item results from the need to ensure the appropriate protection of the "Cristal Grottos" chambers, which - pursuant to the regulation no. 84/2000 of the Governor of the Małopolska Region dated September 11, 2000 have been classified as a nature reserve. The contemplated alteration works to be performed inside the workings include the necessary ripping of the working footwalls, sidewalls and ceilings, the exchange of wooden supports, the installation of the cribbing and rock bolt supports. The alteration works will include the restoration of old, wooden water drainage process lines as well as fragments of sidewalls recreated using salt blocks. The works concluded under this item will encompass the continuation of works performed in 5 workings in total;
- Restoration of workings forming part of the existing tourist route, the Cracow Saltworks Museum and the sanatorium. This task also encompasses the performance of protective works for workings which have functional links with the structures referred to above; the performance of works under this item results from the need to ensure the maintenance of historical workings of the existing tourist route, the Cracow Saltworks Museum and the underground sanatorium. These areas include historical workings of the highest order, the preservation and protection of which - using all available means and methods which are constantly being enhanced - remains an unquestionable priority and must be ensured pursuant to the provisions of applicable monument protection laws. Furthermore, it is necessary to maintain the highest safety standards inside these workings in order to secure the surrounding rock mass, both in their immediate surroundings (ceilings, sidewalls and footwalls), and in their immediate vicinity, as well as to ensure the appropriate ventilation levels, quality of passages etc. due to the mass movement of persons visiting the said working without any personal protective equipment whatsoever, i.e. without protective clothing, anti-slip footwear, head gear, personal lights or escape respirators with carbon monoxide scrubbers in the event of fire. For the above reason, the necessary works aimed at the improvement of the current standard of workings the technical condition of which keeps deteriorating must be performed; otherwise, such workings may only be closed to the public in the relatively near future, which, in case of workings which perform important functions, may result in
parts of the tourist route, the museum or the sanatorium being made inaccessible; in extreme circumstances this may even extend to the entire tourist route, museum or sanatorium. The works concluded under this item will encompass the performance of protective works in the following areas:
- $\mathbf{3 2}$ workings comprising the tourist route, the Cracow Saltworks Museum and the sanatorium or serving as escape routes or ventilation shafts,
- $\mathbf{1 7}$ complexes of galleries and chambers.

The works in question will, in many cases, form a continuation of protective works performed in the preceding periods. The works will encompass the reinforcement of the rock mass surrounding the workings in question through the installation of rock bolt supports in a manner which ensures that the nature of the workings is left intact as well as through the construction of wooden cribbing and restoration of antique fixtures and fittings.

- Expansion of the scope of protection historical workings. The preservation and protection of historical workings using all available means and methods remains the basic task of the mining facility according to its articles of association and must be carried out pursuant to the provisions of applicable monument protection laws. Every single historical working which is properly preserved and protected presents a value which is difficult to quantify, for each of them bears testimony to the history and technical knowledge of the period from which is originates, with hardly any examples of historical monuments of this kind surviving anywhere else in the world. Furthermore, every working neighbouring the restored historical chambers and tunnels in which the appropriate protective mining works are performed greatly increases the chances of such historical structures being maintained in a good condition, as the protective works in question contribute towards the geomechanical stabilisation of the surrounding rock mass in the entire region. The works performed under this item cover the following areas:
- $\mathbf{1 0}$ split-level workings,
- 19 galleries,
- 21 chambers,
- 9 complexes of galleries and chambers

The protective works inside these workings are intended to restore them to their original state without excessive interference with their appearance and historical features. The works will involve the use of traditional protective materials such as timber or, in cases where of works intended to reinforce the durability of the surrounding rock mass - anchors (bolts), epoxy glass and grouts;

- Restoration and protection of historical functional workings. The structure of the mine which has been in use for hundreds of years incorporates many workings which cannot currently be made available to visitors. However, these workings form a network of ventilation shafts, transport routes and access tunnels leading to areas where underground leakages occur. Due to their historical features and the recommendations of the commission appointed by the Chairman of the State Mining Authority, the mine is planning to perform protective works in the following areas:
- 26 workings and complexes of galleries, chambers and split-level workings.

Furthermore, ad-hoc protective works will also be performed inside historical workings; these works will include the immediate repairs of any damages to the workings on an ongoing basis which are identified in the course of periodical inspections performed by the Wieliczka Salt Mine inspection services as well as works which involve obtaining salt material which is necessary to conduct refurbishment works inside historical workings as well as to protect the historical fixtures and fittings present inside those workings which are in a dilapidated condition.

According to the assumptions contained in the Programme for years 2014-2020, the total cost of the aforementioned tasks will be approx. PLN 314 million.
3. performance of protection works, works aimed at the prevention of risks related to the liquidation of the mining facility, including the modernisation of the main parts of operational infrastructure of the mining facility as well as alteration works in some of the primary galleries, sloping shafts and small shafts in order to ensure the implementation of the primary spatial structure of the target technical model of the mine.

The scope of works scheduled for implementation in years 2014-2020 encompasses tasks pertaining to ensuring the safety of mining operations which are necessary for the target technical condition of the mine to be attained, i.e.:
-Leakage containment, water drainage and works aimed at counteracting waterrelated risks - the entirety of operations related to the containment of leaks, water drainage from the mine and the necessary works aimed at counteracting waterrelated risks. The water drainage operations are necessitated by the need to counteract the dangers inherent in the presence of water and are intended to prevent the workings from being flooded by numerous leaks. The works in question include the containment of the leaks using special sumps and then draining the water using an extensive network of pipes to level VIII, where the water reservoirs are located; from there, the water is pumped upwards to the surface. At the present stage, approximately of $136000 \mathrm{~m}^{3}$ saltwater flows into the mine every year. The mine maintains a register of leakages on an ongoing basis, documenting, inter alia, the flow rate and saturation thereof. In the process of leakage disposal operations conducted at a disposal plant located on the surface, each year approximately $10000 \mathrm{~m}^{3}$ of sludge is obtained, forming a residue of the chemical brine purification process. The sludge in question is then deposited inside abandoned workings. The water drainage operations also include the maintenance of a separate saturated brine installation intended to support the performance of backfilling works using hydraulic backfill, the said installation encompassing the main pumping station and a network of pipes which directs the reclaimed brine away from the areas where backfilling works are performed. The installation designed for the purposes of conveyance o saturated brine from hydraulic backfill is a close-circuit system.

- The primary maintenance works in the main transport tunnels of the mining facilities (horizontal transport) include the performance of works intended to maintain the haulage tunnels and electric locomotive depots in a safe condition, the performance of maintenance works on pit railway tracks, turnouts and underground transport facilities as well as on means of transport (electric locomotives, passenger carts, mine carts for carrying excavated material, timber carriers and platform carts) used for the transportation of persons, goods and excavated material, the
performance of repairs, checks and conservation works on windlasses inside sloping shafts and small shafts as well as on scrapers operating in locations where excavated material obtained during alteration works is deposited. The contemplated works also encompass the continued operations aimed at the reconstruction of the mine railway transport system on level III which will, inter alia, serve the needs of transportation works which are necessary to complete protective works performed in the historical section of the mine as well as works related to the liquidation of the non-historical, eastern section of the mine. The reconstruction of the mine railway system on this level will require the performance of works related to the renovation of the supports alongside the transport routes leading down the historical workings on level III.
- Mining plant operations management (surveying and geological services, lamp room, Mining Emergency Rescue Station, dispatch room, waiting room) - the works scheduled to be performed under this item include works which must be performed pursuant to the applicable provisions of the Geological and Mining Law as well as of the Construction Law. The works in question will encompass the following operations:
- surveying services, measurements of surface and rock mass deformations,
- completion surveys and stock-taking surveys, both underground and on the surface,
- stock-taking, shaft measurements,
- lamp room maintenance,
- dispatch room maintenance,
- maintenance of the Mining Emergency Rescue Station,
- maintenance of personnel responsible for blasting operations,
- waiting room maintenance;
- Ventilation system operations - performance of works necessitated by the need to ensure proper ventilation of the underground workings forming part of the mining facility. The task in question includes the following operations:
- methane level measurements, ventilation measurements and taking air samples for laboratory analysis,
- maintenance, conservation and repair of ventilation devices providing ventilation in dead-end workings,
- firefighting equipment maintenance,
- radiation measurements,
- construction, alteration and ongoing works related to brattice maintenance,
- air dehumidifying processes in the Daniłowicz shaft,
- modernisation of the air-conditioning station alongside the Daniłowicz shaft,
- installation of sampling lines in high-ceilinged chambers,
- modernisation of the primary ventilation fan station,
- renovation works on the primary ventilation fans alongside the Kościuszko and Wilson shafts,
- extension of the early fire detection systems inside workings (fibrolaser),
- ventilation air heating operations in the Kinga and Daniłowicz shafts,
- modernisation of the equipment for the ventilation of dead-end tunnels,
- maintenance of primary ventilation fans and underground air dehumidification installation,
- major renovation of the primary ventilation fans;
- Maintenance and modernisation works on transportation and ventilation shafts inside the mining facility - performance of works necessitated by the need to ensure proper operation of basic shaft installations of the mining facility The task in question includes the following operations:
- servicing, control, maintenance and repairs of mining hoists in the Kinga, Daniłowicz, Kościuszko and Regis shafts,
- maintaining duty shifts, performing checks and maintenance of signalling systems inside shafts and on individual levels,
- transportation of materials using the Kinga shaft,
- renovation works on the mining hoists located in the Kinga, Daniłowicz, Regis and Kościuszko shafts,
- renovation and cleanup works on the ladder compartments in the Wilson, Kinga, Daniłowicz, Kościuszko, Paderewski, and Boża Wola shafts,
- servicing, repairs, periodical checks and inspections of the special transportation equipment - the goods and passenger elevator inside the Regis shaft,
- servicing, repairs, periodical checks and inspections of the special transportation equipment - the passenger elevator in the Staszic chamber and the platform elevators in the Barącza sloping shaft,
- check-up and maintenance of the controlling and measuring equipment inside the shafts,
- continued construction of the emergency hoist inside the Kościuszko shaft,
- replacement of girders in the shaft reinforcement structure of the Kinga and Daniłowicz shafts, continued renovation of the ladder compartment and reinforcement structure inside the Kościuszko shaft,
- reinforcement of supports inside the Kinga, Daniłowicz and Kościuszko shafts,
- construction of new skips for the mining hoist located inside the Kinga and Daniłowicz shafts
- adaptation of the Paderewski shaft to the function of an evacuation route,
- inspections, renovation and modernisation works on the pipelines installed inside shafts and small shafts,
- Maintenance and modernisation of electrical power and mechanical infrastructure
of the mining facility - performance of works necessitated by the need to ensure proper operation of the electrical power installations of the mining facility. The need to ensure the constant operation of the electrical power and mechanical infrastructure of the mining facility arises from the provisions of applicable laws. The task in question includes the following operations:
- works pertaining to electrical installations performed on an ongoing basis, duty shifts, maintenance of the surface power supply network and the inspections, maintenance and renovation works on surface electrical installations,
- works pertaining to electrical installations performed on an ongoing basis, duty shifts, ongoing service and maintenance of the power supply network as well as renovation works on underground electrical installations, ensuring constant operation of equipment,
- ongoing operation of the Main Transformer and Switching Station, maintenance, repairs and check-ups of medium- and low-voltage switching station and of power supply systems for the underground section of the mine, winding engines, ventilation fans, aid dehumidification installation and compressors,
- inspections and measurements of high-voltage installations, measurements concerning electrical power safety measures, protective earthing systems (SUPO) for cables inside shafts and galleries,
- stray voltage measurements,
- ongoing telecommunication works, maintenance of communications in the underground section of the mine, maintenance and renovation of the underground telecommunication network,
- ongoing switchboard maintenance, ongoing telecommunication works, repair and conservation of the surface telecommunication network,
- conservation, repair and inspections of the dispatching system and the CCTV system
- installation and maintenance of compressed air piping (dismantling operations),
- maintenance, inspections, servicing, check-ups and repairs of compressors
- rewiring electrical motors in the primary and auxiliary pumping station,
- installation and maintenance of the network of pipelines in the underground section of the mine along with the modernisation thereof,
- modernisation of electric power generators,
- replacement of the $15 / 3 \mathrm{kV}$ Main Transformer and Switching Station transformers,
- modernisation of the underground medium voltage 3 kV switching stations ("Gruszczyn", "III Wschód", "Kościuszko", "Hala Pomp") and the exchange of underground transformer stations,
- replacement of medium voltage cable lines on the following routes: III Wschód Galicja, Kinga - Chamber VIII/15, and GPS - GSTR (Main Transformer and Switching Station),
- replacement of low and medium voltage cable lines,
- modernisation of the safety parameter control systems,
- replacement of low voltage contactor switches,
- replacement of transformer and lighting systems,
- replacement of the telecommunication network (underground section),
- switchboard modernisation,
- installation of an additional, alternative power source;
- Alteration works on galleries, split-level small shafts and sloping shafts - alteration works in workings scheduled to be performed under this item form part of preparations for liquidation of the industrial facility. Alteration works scheduled for years 2014-2020 will cover approx. 9370 metres of the galleries which serve as access paths to areas where backfilling works are performed as well as the galleries which serve as access paths to contemplated drilling areas from which the process of liquidation of single galleries and chambers or groups thereof will be performed. Furthermore, the alteration works in question are performed in order to facilitate access to areas where sumps and backfill dams are scheduled to be constructed in order to cut the liquidated areas from the rest of the mine as well as to areas where pipelines used for backfill mixture supply and backfill brine disposal shall be installed. In order to limit the cost of transportation of excavated material in the course of alteration works in the region, specific areas for the disposal of such excavated material shall be designated;
- Renovation of functional workings: galleries, split-level small shafts and sloping shafts - the duty to maintain the workings in a safe and functional condition stems from the applicable provisions of mining law. The contemplated renovation works to be performed inside the workings differ in terms of scope, from local ripping operations or replacement of individual parts of damaged support structures to the complete reconstruction involving widening the working, construction of new supports and installation of equipment, depending on the intended function of the given working. There are also plans for various service openings related to the scope of contemplated works (ventilation shafts, culverts, chutes) in order to optimise the costs of operation of the Mine. The scope of works will cover 7150 metres of workings which form the basic component of the target technical model devised for the mine. The tasks to be performed under this item include the following works:
- ad-hoc works necessitated by the deterioration of the condition of workings,
- modification of main ventilation shafts,
- maintenance of split-level sloping shafts and small shafts,
- drilling of service openings,
- maintenance functional workings on levels I - VIII in a safe condition
- modernisation of the auxiliary pumping station in chamber VIII/15,
- construction of an emergency pumping station in the Barycz drift on level VII,
- construction of emergency pumping stations in the Kościuszko shaft on levels IV, V, VI,
- modification of the pumping chamber on level VIII,
- construction of backfill brine reservoirs on level VIII,
- alteration works inside the Biliński-west drift, the Tatary 2 cross-drift and the construction of a sloping ventilation shaft from level VI to level VIII;
- Modernisation of the disposal plant along with its power supply facilities - this task will encompass the modernisation of the disposal plant which has been in operation since 2003 as well as the modernisation of saltwater disposal installations so that they may function in changing operational conditions;
- Measurements and checks linked with the monitoring of the condition of workings
- the performance of works of this kind stems from the need to monitor the condition of workings inside the mining facility.

The implementation of this task will involve the performance of the following works:

- endurance tests of rock bolt supports, monitoring the condition of workings and the measurements taken by the measuring instruments,
- inspections of high-ceilinged chambers - taking measurements of cracks in such chambers are performed in order to check whether there is a risk of loss of stability, which may result in a cave-in (due to the substantial height of the larger chambers in which these checks are to be made, the works will be performed by personnel specialising in industrial climbing),
- workings support monitoring,
- extension of the monitoring network designed to detect rock mass cracking and splitting;
- Repair works in buildings and facilities linked to the functioning of the mine according to the provisions of Construction Law, the Mine is under an obligation to conduct technical inspections of buildings and structures. The inspections in question allow the documentation of individual buildings and structures to be supplemented by making appropriate inscriptions in the documentation of such structures stating their technical condition, the irregularities found and the actions which must be taken in order to remedy such irregularities. Based on the entries made in the documentation of individual buildings and structures which indicate that certain irregularities must be remedied, the Mine is under an obligation to take the necessary action without delay. The works to be carried out as part of this task also include the renovation of facilities of the Mine inscribed into the Register of Monuments, including the finishing works pertaining to the restoration of the shafttop of the Górsko shaft;
- Construction of backfill nodes - this task will encompass the construction of backfill nodes which will be used for the purposes of liquidation of workings using dry backfill from the surface; these works are scheduled to be performed according to the timetable for the liquidation of operational boreholes and workings;
- Installation of a security system for underground workings - these works will encompass the necessary operations which shall include the following tasks: bringing the 3 kV network and the low-voltage distribution network (including lighting installation and power supply for devices present inside the underground workings) in line with the requirements of the applicable mining regulations as well as the necessary replacement of certain components of the system, including sensors. Other works to be performed within the framework of this task include the installation of an emergency power generator for the security system, protecting it against external power outages;
- Modernisation of the roads and yards located on the premises of the Wieliczka Salt Mine - this task encompasses the necessary modernisation of this infrastructure for the purposes of transportation in connection with the liquidation, preservation and safeguarding operations performed at the Wieliczka Salt Mine;
- Modernisation of the sewage, water supply and telecommunication network as well as brine pipelines and reservoirs located in the mining facility - this task
encompasses the necessary modernisation of this infrastructure in order to satisfy the technological needs related to the liquidation, preservation and safeguarding operations performed at the Wieliczka Salt Mine, including the replacement of pipeline connecting the Disposal Facility and the Kościuszko shaft as well as the modernisation of brine reservoirs;


## - Supervision of the contemplated works.

According to the assumptions contained in the Programme for years 2014-2020, the total cost of the aforementioned tasks will be approximately PLN 294 million.
4. Rehabilitation of the damage caused by the operations of the "Wieliczka" salt mine in 89 different facilities as well as revitalisation and reclamation of 6.0 hectares of land previously linked with the now-defunct mining operations; liquidation of 6 facilities linked to the now-defunct mining operations at the "Wieliczka" mining facility. The works planned for years 2014-2020 are as follows:

- repair of mining damage to buildings and structures on the basis of final and legally binding decisions of the Commission for Mining Damage, judgements and decisions issued by courts of law as well as settlements reached,
- repair of mining damage to buildings and structures of the mining facility,
- repair and protection of buildings and structures located in the vicinity of the northern boundary of the salt deposit,
- payment of compensation for mining damage on the basis of court judgements as well as in the course of settlement proceedings,
- reclamation and revitalisation of the site of the salt mine between Dembowskiego St., Matejki St. and Daniłowicza St. (surface area: 3.0 hectares) and between Jedynaka St. and Kościuszki St. (surface area: 3.0 hectares),
- liquidation of 6 surface structures: the Saltworks switching station, the Paderewski shaft ventilation facility building, the trestlework and pipeline leading from the Saltworks building towards the reservoirs in the vicinity of the Kościuszko shaft as well as the brine reservoirs and backfill installations on the surface; liquidation of the Daniłowicz shaft air conditioning facilities preceded by the installation of an
equivalent air dehumidification system; liquidation of the mechanics workshop and welding shop halls;

According to the assumptions contained in the Programme for years 2014-2020, the total cost of the aforementioned tasks will be approximately PLN 15 million.
5. disposal of 953.4 thousand $\mathrm{m}^{3}$ of brine.

The brine disposal scheduled for years 2014-2020 encompasses brine and saltwater which naturally occur in the workings of the "Wieliczka" mining facility, as well as the brine and saltwater which are being naturally pushed out from the rock mass in the process of convergence of chambers of the "Barycz" mining facility once the process of liquidation of workings is complete. The disposal of the waters in question is necessary due to the need to ensure the protection of surface watercourses against salinisation; the disposal process is performed at the Disposal Facility, using the thermocompression method. In years 2014-2020, approximately 953.4 thousand $\mathrm{m}^{3}$ of such waters will undergo disposal by way of heat treating; the entire project will encompass the following tasks:

- disposal of brine from the "Wieliczka" mining facility,
- renovation works and purchase of components and devices necessary to ensure the operation of the Disposal Facility,
- disposal of brine from the area of the now-defunct Barycz mining facility, - supervision of the works covered by the schedule.

The project which involves the disposal of brine from the "Wieliczka" Salt Mine takes into account the need to ensure the maintenance and operation of surface-based leakage disposal installations and devices, the works connected with steel and concrete reservoir scrubbing, securing the network of pipelines and trestles against corrosion, maintenance and operation of the brine equalisation and slurry extraction node installation, purchase of replacement parts and fast-wearing components or consumables, including certain spare parts which ensure the technological safety of the waste disposal process.

According to the assumptions contained in the Programme for years 2014-2020, the total cost of the aforementioned tasks will be in excess of PLN 80 million.
6. preparation of designs, documentation, opinions, expert evaluations and analyses pertaining to the scope of the programme, the total cost of which for years 2014-2020 is estimated at approx. PLN 35 million.
7. general management activities, i.e. administration of the Mine in the scope necessary to ensure the implementation of the contemplated scope of tasks, the total cost of which for years 2014-2020 is estimated at approx. PLN 110 million.

The total cost of activities earmarked for implementation under the Programme in years 2014-2020 is over PLN 950 million.

It needs to be emphasised that a substantial part of the tasks specified above in items 3,5 and 6 constitute tasks associated with ensuring the ongoing operation of the mining facility. The performance of these tasks is necessary to ensure the safe underground operations of the mining facility known as the "Wieliczka" Salt Mine. The tasks in question include, in particular:

- leakage containment, water drainage and works aimed at counteracting waterrelated risks
- basic maintenance works in the main haulage tunnels of the mining facility (horizontal haulage),
- mining plant operations management (surveying and geological services, lamp room, Mining Emergency Rescue Station (KSRG), dispatch room, waiting room),
- operation of the mine ventilation systems,
- maintenance and modernisation works on transportation and ventilation shafts of the mining facility,
- maintenance and modernisation of the electrical power and mechanical infrastructure of the mining facility,
- renovation of functional workings: galleries, split-level small shafts and sloping shafts,
- measurements and checks linked with the monitoring of the condition of workings,
- repair works in buildings and facilities linked to the functioning of the mine,
- brine disposal,
- preparation of designs, documentation, opinions, expert evaluations and analyses pertaining to the ongoing operations of the mining facility,
- supervision of the works linked with the ongoing operations of the mining facility.

The works in question are mostly performed by the personnel of the mining facility. The scope of tasks pertaining to the ongoing operations of the mining facilities also includes most of the tasks related to general management. The annual cost of performance of these tasks is in excess of PLN 40 million, with 230 employees on average performing works aimed at the implementation thereof every day.

Insofar, as making new areas of the mining facility accessible to visitors is concerned, the "Wieliczka" Salt Mine Company is currently implementing a project designated as "Providing access to the workings of the Wieliczka salt mine using new means of transportation on level III". Parts of the project which involve mining operations are included in the Programme for years 2014-2020. The project has received the positive opinion and approval of the Regional Monument Inspector of the Małopolska Region in Kraków. Within the framework of this project, the administrators of the mining facility intend to provide a tourist product which harks back to the traditions of the original tourist routes and of the development of tourism, presented in the context of mine haulage. The entire product will contain references to $19^{\text {th }}$ century Imperial Royal traditions of the Galicia region. By riding the small-gauge mine train, the visitors will embark upon an epic journey through the ages, with the main idea being exploration through travel. This tourist attraction will also constitute a form of "time travel" experience, going back to the very first "tourists" who came down to the salt mine to explore.

The works performed within the framework of this project will make it possible to open a number of historical workings to visitors; works are also underway with the intention of restoring the mine railway which previously operated on the historical route leading down the workings forming part of level III ("Słowacki"). The works in question will cover the following areas:

- Galicia II chamber, in which the battery charging station and workshop facilities necessary to ensure the safe operation of the passenger transport system will be located;
-the Pistek tunnel, the Kaniów cross-drift, the Hauer drift and the Wałczyn cross-drift, which will be shown to tourists during rides in open-top passenger carriages designed specifically for this purpose;
- the Gołuchowski chamber in which the underground railway station will be located just as it was back in the late $19^{\text {th }}$ and early $20^{\text {th }}$ century.

In additions, stops for boarding and alighting for tourist and crew as well as for loading goods have been positioned in the area of the Kinga shaft, the Daniłowicz shaft, the Gołuchowski chamber and the Regis shaft.

The small-gauge mine train will also make it possible for tourist to reach the Regis shaft quickly in order to leave the mine once the tour is over. This solution will expand the visitors' knowledge of the mine and will add new areas to those currently available; these areas had once been open to visitors but were then closed off during the interwar period. Having completed their tour of the currently available parts of the mine and having reached the Daniłowicz shaft, visitors will be able to take advantage of yet another tourist attraction, exploring a further section of the mine in a manner which ensures that no additional effort on their part is necessary. The mine train will also increase the efficiency of the haulage of goods for the purposes of working preservation works and for the crew performing such works.

The presentation in question will encompass light shows, large-format prints and, to a limited extent, multimedia. In addition to the main theme - the development of the tourism industry - the natural and historical features of the site will also be presented during the tour.

The idea itself was partially inspired by the visit of emperor Franz Joseph I of Austria which took place on October 13, 1851, yet it also makes references to many other famous people who have visited the Wieliczka mine in the past. The majority of the tour will centre around "Imperial Royal" themes and follow the pattern of the very first organised tours originally created by the Austrians. The entire arrangement is intended to recreate the opulence of the Habsburg era, with the décor of the underground tunnels designed to evoke the atmosphere of the emperor's visit.

The structure of this tourist product, consisting of an underground train ride on the one hand and of a tour of the Gołuchowski chamber on the other, results in the formation of three distinct narrative spaces.

The interior design which evokes the atmosphere of the Habsburg period goes beyond the Gołuchowski chamber itself, extending to the remaining stations which the visitors will use as well as to the dispatcher's facilities inside the Gołuchowski chamber.

The Gołuchowski chamber itself, however, will feature the most lavish interior design of all. The plans call for a painstaking recreation of the historical appearance of the chamber from the times of the Austrian reign, when the chamber formed a part of the tourist route that existed there back then. There are also plans for putting on display the preserved period features of the working: traces of handcrafted decorations and the remains of a mining emblem and a plaque set into a brick frame. The management of the mine would also like to ensure that the light fixtures used in this section are reminiscent of the type of lighting that was used inside the mining facility at the time. The discreet sounds of music recorded by the salt mine orchestra would be heard in the background. Up in the galleries, an exhibition on the development of tourism shall be presented, consisting of prints and pictures along with the related descriptions, allowing the visitors to place the rise of the tourist industry in a historical, cultural and technological context of the period.

It is only in the final section of the route - the underground train ride - which breaks with the omnipresent $19^{\text {th }}$ century style. This section of the tour presents eminent personages who had visited the mine over the ages. The design scheme is entirely modern and minimalist in nature.

The decorations will mostly consist of realistic, large-format prints. It is likely that these decorations will only be illuminated as the train approaches, which will create an additional feeling of surprise and mystery.

The contemplated time of completion of this project is the year 2017, with the total cost being estimated at approximately PLN 27 million.

The management of the Wieliczka mine has plans for implementing a new cultural heritage product covered by the application for EU subsidies under action 8.1 of the Operational Programme Infrastructure and Environment for years 2014-2020. The project
in question would involve the safeguarding of further underground tunnels and chambers and making them available to visitors; the workings in question are located on level I, upper level II, lower level II and the Kazanów level. The workings may also serve as temporary replacements of the current tourist route while the necessary protective works are being performed. The workings covered by the project shall be used for the purposes of educational activities, presenting the spatial development of the mine itself as well as information on geology and mining and the significance thereof for the development of technology. In particular, the exhibition will focus on the period during which salt mining relied on mechanical methods, i.e. the period between the 17th and the 20th century. Parts of the project which involve mining operations are included in the Programme for years 2014-2020. The works referred to above shall be performed in the following workings:

- The Kuchnia tunnel, the Kuchnia chamber, the Kunegunda drift - level I;
- the Rainer chambers connecting level I ("Bono") with upper level II ("Markowski Brothers");
-the Neustadter cross-drift and the Geramb drift - the "Mickiewicz" lower level II;
-the sloping shaft leading into the Żralskie Stare chamber, connecting the "Mickiewicz" lower level and the "Kazanów" level;
- the Freitag chamber and the access tunnels thereof - the "Kazanów" level.

Following the implementation of the project, the "Wieliczka" Salt Mine Company intends to open a new tourist route dedicated to educational and cultural themes, encompassing 13 chambers in total and with a length of 1.25 kilometres (plus the length of the sections shared with the existing route).

The opening of the new tourist route will also contribute to the safety, quality and comfort of the visitors, since the number of tourists on the main route will decrease. Safeguarding the historical workings, increasing the total capacity of the available tourist routes and enhancing the safety of visitors will make it possible to secure a greater number of historical tunnels and chambers against the adverse effects of rock mass movements and to open such tunnels and chambers to visitors. Technical documentation has been prepared in the course of the preparatory stage; in addition, the project has also received
the positive opinion and approval of the Regional Monument Inspector of the Małopolska Region in Kraków.

The scope of the project encompasses the performance of mining, electrical, telecommunication and IT-related works as well as adapting the workings for use as tourist attractions.

The mining works referred to above will include, among others:

- protection and adaptation of galleries by means of mining supports,
- alteration works on the footwalls of the workings - floor levelling and installation of flooring, containment of brine leakages, redirecting the brine to the surface and the disposal thereof at the saltworks facility,
- protective and alteration works on the sloping shaft,
- mining operations intended to secure the chambers, the removal of rock debris, footwall levelling, securing the footwall and sidewalls by way of rock bolt supports, covering exposed gangue by means of wooden casings or protective nets,
- other auxiliary works associated with securing parts of the décor inside the workings and with displaying parts of mining support structures, interesting geological features, salt mining techniques used inside the workings and so forth.

The works in questions will be performed in underground workings using mining techniques applied in the course of securing historical underground workings. The necessary works on electrical, telecommunication and IT systems will include the installation of electrical, telecommunication and IT networks and systems using the installation technologies typically used in underground workings and ensuring that there is no adverse impact on the surrounding environment and the structure and form of historical workings.

The adaptation of underground mining workings which allows such workings to be used as the site of an underground exhibition dedicated to educational and cultural themes related to the geological structure of the salt deposit, the history of the Wieliczka Salt Mine and the protective works performed inside the mining facility will be performed.

The cost of the project is estimated at approximately PLN 33 million. The implementation of the project is scheduled to take place in years 2016-2020. The scope, form and time of completion will depend on whether EU subsidies are obtained under action 8.1 of the

Operational Programme Infrastructure and Environment for years 2014-2020. At the present stage, the project was placed on the reserve ranking list of the Ministry of Culture and National Heritage.

## 3. Other current conservation issues which identified by StateS) Part(ies) which may

 have an impact on property's Outstanding Universal Value.N/A
4. In conformity with Paragraph 172 of the Operational Guidelines, describe any potential major restorations, alterations and/or new constructions) intended within the property, the buffer zones) and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.

N/A

## 5. Public access to the state of conservation report.

The State Party expresses its consent to the publication of the Report on the state of conservation of the UNESCO World Heritage property in its entirety.

## 6. Signature



## Appendices:

1. Agreements concluded between the administrators of individual components of the property dated December 16, 2014.
2. Annex to the agreement between the administrators of individual components of the property, concluded on May 24, 2016.

KOPALNIA SOLI<br>„WIELICZKA"<br>Spółka Akcyjna

President of the Management Board
KSW/P/401/2014
[signature]
dr hab. inż. Kajetan d'Obyrn
Certified true copy
Signature $\qquad$
Date 2015-01-09
[handwritten: pages 1-3]

## AGREEMENT

confirming the establishment of Coordination and Monitoring Team
for the UNESCO World Heritage Site
"Wieliczka and Bochnia Royal Salt Mines"
concluded in Wieliczka on 16 December 2014
Member of the Management Board,
Finance and Economics Tomasz Jachna
by and between the following Parties:

1. Kopalnia Soli „Wieliczka" S.A.
1) registered office and address of the company: 32-020 Wieliczka, Park Kingi 1 ,
2) registration court in which the company files are kept and the number under which the company is registered: National Court Register maintained by the District Court for Kraków-Śródmieście in Kraków, $12{ }^{\text {th }}$ Commercial Division of the National Court Register, under KRS no. 0000278401,
3) tax identification number (NIP): 683-000-34-27,
4) share capital of PLN $21,000,000.00$; fully paid up,
5) REGON: 000041683,
represented by:
1. Kajetan d'Obyrn, DSc, Eng. - President of the Management Board,
2. Tomasz Jachna - Member of the Management Board, Finance and Economics

## 2. Muzeum Żup Krakowskich Wieliczka

1) registered office and address: 32-020 Wieliczka, ul. Zamkowa 8,
2) entry in the National Cultural Institutions Register - RNIK 12/92,
3) tax identification number (NIP): 683-000-01-56,
4) REGON: 000276080 , represented by:
1. Prof. Antoni Jodłowski, PhD - Director
2. Kopalnia Soli Bochnia sp. z o.o.
1) registered office and address of the company: 32-700 Bochnia, ul. Campi 15,
2) registration court in which the company files are kept and the number under which the company is registered: National Court Register maintained by the District Court for Kraków-Śródmieście in Kraków, $12^{\text {th }}$ Commercial Division of the National Court Register, under KRS no. 0000478929 ,
3) tax identification number (NIP): 868-000-04-85,
4) share capital: PLN $1,000,000.00$,
5) REGON: 000867845,
represented by:
1. Krzysztof Zięba - President of the Management Board

In view of the need to protect and preserve the UNESCO World Heritage Site "Wieliczka and Bochnia Royal Salt Mines", the Site Managers of its component sites establish the Coordination and Monitoring Team for the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines", hereinafter referred to as Team.

## § 2

1. The Team consists of the representatives appointed by the following Parties:
a. Kopalnia Soli „Wieliczka" S.A.,
b. Kopalnia Soli „Bochnia" Sp. z o.o.,
c. Muzeum Żup Krakowskich Wieliczka, hereinafter called Partners, and the Team Secretary.
2. The President of the Kopalnia Soli „Wieliczka" Management Board shall be the Team Chairman who organises and coordinates the work of the Team.
3. Team Meetings shall be convened by the Chairman himself or by the Chairman at the request of one of the Partners.
4. The Partners undertake to involve in the Team's works and to mutually report on all events affecting the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines".
5. The Head of the Kopalnia Soli „Wieliczka" S.A. Planning Department is the Team Secretary.

## § 3

1. All reports and statements relating to collectively all component sites of the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines" submitted to the Minister of Culture and National Heritage, the National Heritage Board of Poland, and the World Heritage Centre require signatures of all Parties to the agreement.
2. The Parties to the agreement authorise the Team Chairman to conduct correspondence and to forward information, explanations, etc. to the Minister of Culture and National Heritage, the National Heritage Board of Poland, and the World Heritage Centre on collectively all component sites of the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines", after consulting the Partners to the agreement.
3. The Team Secretary prepares the drafts of information, statements, reports, explanations, etc. on collectively all component sites of the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines" pursuant to the working arrangements with persons appointed by the Partners.
4. Within 14 days from the date of the agreement, each Partner shall provide other Partners and the Team Secretary with written information containing personal data and contact details of persons referred to in paragraph 2.
5. In the case of change of persons referred to in paragraph 4, the Partners shall promptly notify each other of this fact.
6. Information, statements, reports, explanations, etc. concerning exclusively one of the component sites of the UNESCO World Heritage Site - "Wieliczka and Bochnia Royal Salt Mines" shall be submitted separately by the Site Manager.

## § 4

The Parties authorise the Team Chairman to submit a copy of this agreement to the Minister of Culture and National Heritage.

Amendments to this agreement require written form.
§ 6
The agreement was drawn up in 3 counterparts, one for each Party.

## Signatures of the Parties:

Kopalnia Soli „Wieliczka" S.A.<br>President of the Management Board<br>Kajetan d'Obyrn, DSc, Eng.<br>Member of the Management Board, Finance and Economics<br>Tomasz Jachna

Kopalnia Soli Bochnia sp. z 0.0
President of the Management Board Krzysztof Zięba, MSc, Eng.
[illegible stamp and signature]

Legal Counsel
Maria Skamla-Reuss, LL.M.

# [KOPALNIA SOLI "WIELICZKA" <br> Spółka Akcyjna 

Certified true copy
Signature
Date 2016-05-24
[handwritten: pages 1-2]
President of the Management Board
Zbigniew Zarębski, MSc, Eng.
Member of the Economics Management Board Mariusz Kękuś]

## Annex No. 1 <br> to agreement No. KSW/P/401/2014

concluded in Wieliczka by and between:
Kopalnia Soli .,Wieliczka" Spółka Akcyjna

1) registered office and address of the company: 32-020 Wieliczka, at Park Kingi 1,
2) registration court in which the company files are kept and the number under which the company is registered: National Court Register maintained by the District Court for Kraków-Śródmieście in Kraków, $12^{\text {th }}$ Commercial Division of the National Court Register, under KRS no. 0000278401,
3) tax identification number (NIP): 683-000-34-27,
4) share capital of PLN $21,000,000.00$; fully paid up,
5) REGON: 000041683, represented by:
1. Zbigniew Zarebski - President of the Management Board
2. Mariusz Kękuś - Member of the Management Board, Economics
and
Muzeum Żup Krakowskich Wieliczka
1) registered office and address of the company: 32-020 Wieliczka, ul. Zamkowa 8,
2) entry in the National Cultural Institutions Register - RNIK 12/92,
3) tax identification number (NIP): 683-000-01-56,
4) REGON: 000276080, represented by:
1. Jan Godłowski - Director
and
Kopalnia Soli Bochnia sp. z o.o.
1) registered office and address of the company: 32-700 Bochnia, ul. Campi 15,
2) registration court in which the company files are kept and the number under which the company is registered: National Court Register maintained by the District Court for Kraków-Śródmieście
in Kraków, $12^{\text {lh }}$ Commercial Division of the National Court Register, under KRS no. 0000478929 ,
3) tax identification number (NIP): 868-000-04-85,
4) share capital: PLN $1,000,000.00$,
5) REGON: 000867845; fully paid up, represented by:
1. Zbigniew Rojek - President of the Management Board
as follows:

In view of the rank of objects enlisted on the UNESCO World Heritage List, among which are "Wieliczka and Bochnia Royal Salt Mines", in order to preserve their authenticity, rational and objective value, state of conservation of historic mine workings, and ensure access of the widest possible audience, the Parties agree to introduce into agreement No. KSW/P/401/2014 the following amendments:

## 1

1) In § 3, the paragraphs $7-9$ shall be added and read as follows:
7. Persons appointed by Kopalnia Soli „Wieliczka" S.A. and Muzeum Żup Krakowskich Wieliczka to a working collaboration with the Team Secretary shall jointly, in due course, undertake actions aimed at consulting and expressing opinions on events affecting the state of conservation of Wieliczka Salt Mine workings, made accessible or planned to be made accessible, in its component site enlisted on the UNESCO List.
8. Persons appointed by Kopalnia Soli Bochnia Sp. z o.o. and Muzeum Żup Krakowskich Wieliczka to a working collaboration with the Team Secretary shall jointly, in due course, undertake actions aimed at consulting and expressing opinions on events affecting the state of conservation of Wieliczka Salt Mine workings, made accessible or planned to be made accessible, in its component site enlisted on the UNESCO List.
9. The Teams referred to in paragraphs 7 and 8 may be expanded with specialists - experts by Kopalnia Soli „Wieliczka" S.A., Kopalnia Soli Bochnia Sp. z o.o., or Muzeum Żup Krakowskich Wieliczka, if necessary.

Other provisions to the Agreement remain unchanged.

This annex shall enter into force on the day of its signing by all Parties.

The annex was drawn up in three counterparts, one for each Party.

| Kopalnia Soli „Wieliczka" S.A. | Muzeum Żup Krakowskich Wieliczka | Kopalnia Soli Bochnia Sp.zo.o. |
| :---: | :---: | :---: |
| President <br> of the Management Board Zbigniew Zarębski, MSc, Eng. | Director <br> Muzeum Żup Krakowskich Wieliczka Jan Godłowski | President of the Management Board Zbigniew Rojek, MSc Eng. |
| Member of the Economics Management Board Mariusz Kękuś |  |  |
| signature(s) |  |  |
| Wieliczka, 2016-05-20 | Wieliczka, 23.05.2016 | Bochnia, 24.05.2016 |
| Place date | Place date | Place date |
| [official stamp with the address] | [official stamp with the address] | [official stamp with the address] |
| Manager of Planning Department Jarosław Chwałek, MSc Eng. |  |  |
| LEGAL COUNSEL KR-1413 [illegible signature] |  |  |


[^0]:    ${ }^{1}$ The "Schedule of historical workings at the Wieliczka Salt Mine earmarked for preservation", encompassing 218 chambers, 190 complexes of galleries and chambers as well as 6 mining shafts, constitutes an appendix to the conservation recommendations. This document was prepared by the Cracow Saltworks Museum and the "Wieliczka" Salt Mine in 2010, based on pre-existing interdisciplinary research.

