

# Rosalind Franklin Mars rover passes latest tests ahead of September launch

The European Space Agency (ESA) rover starts the year with months of successful maintenance and functional tests behind it. All its instruments are go for flight, with some minor tuning left to complete this month.

Sue Horne, Head of Space Exploration at the UK Space Agency, said:

The Rosalind Franklin rover showcases some of the best of the UK's space sector and its search for signs of life on Mars will inspire future generations of scientists and engineers.

It's very exciting to see this flagship mission pass the latest tests and see the fruition of many years' hard work as we look forward to the launch later this year.

The rover was built in Stevenage by Airbus, while the UCL Mullard Space Science Laboratory led on a key instrument known as the PanCam, a high-resolution 3D camera which will look at the terrain and rocks to try to detect signs of life.

The University of Leicester, Teledyne e2v and STFC RAL Space worked on the Raman Spectrometer which will use laser light to identify particular minerals and organic compounds and search for life.

Pietro Baglioni, ESA's ExoMars rover team leader, said:

The rover is ready, and together with the [recent drop test success for the parachutes](#), we are positive to be in time for the September launch date.

The Rosalind Franklin rover is currently in an ultra-clean room at the Thales Alenia Space premises in Turin, Italy, right by its travelling companion, the Kazachok landing platform. Following a final review in April, all the components of the spacecraft – rover, descent module, landing platform and carrier – will move to the launch site in Baikonur, Kazakhstan, to prepare for lift-off.

Following the nerve-wracking descent to the surface of Mars, a long-awaited moment in the ExoMars mission will be when Rosalind leaves the landing platform and drives onto the martian soil for the first time.

In preparation for this, the twin of the Rosalind Franklin rover successfully left the platform during recent tests in a Mars terrain simulator at the ALTEC premises in Turin.

While the driving during these exercises takes about 15 minutes, the whole process will last a few Martian days. After landing, the rover will be busy for over a week unfolding its wheels and deploying the mast, among other checkouts.

The ExoMars twin rover, until now known as the Ground Test Model, has a new name: Amalia, named after Professor [Amalia Ercoli Finzi](#), a renowned astrophysicist with vast experience in spaceflight dynamics.

Amalia was the first woman to graduate in aeronautical engineering in Italy, and besides serving as a scientific advisor for ESA and NASA, she designed the [drill on Rosetta's lander](#) Philae and strongly pushed for the development of the ExoMars drill 20 years ago.

Engineers are using the Amalia rover to recreate different scenarios and help them take decisions that will keep Rosalind safe in the challenging environment of Mars. The model is fully representative of what the rover will be able to do on the Red Planet.

Amalia has so far demonstrated [drilling soil samples down](#) to 1.7 metres and operate all the instruments while sending scientific data to the [Rover Operations Control Centre](#) (ROCC), the operational hub that will orchestrate the roaming of the European-built rover on Mars.

The ESA-Roscosmos Trace Gas Orbiter is waiting for the arrival of ExoMars to the Red Planet. In addition to its own science mission, the orbiter relays data from [NASA's Perseverance](#) rover.

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## [Magistrates' Courts given more power to tackle backlog](#)

- Magistrates to give prison sentences of up to 12 months – double the current maximum
- this will free up nearly 2,000 extra days of Crown Court time each year
- latest step to drive down the backlog and speed up justice in the pandemic

Under plans announced by Justice Secretary Dominic Raab, the maximum 6-month prison sentence that can currently be handed out by Magistrates is to be doubled to a year – freeing up an estimated 2,000 extra days of Crown Court time annually.

Today's move will increasingly allow the serious cases heard by magistrates – such as fraud, theft and assault – to be sentenced by them too. At present, any crimes warranting a jail term of more than 6 months must be sent to Crown Court where judges determine the appropriate sentence.

Retaining more cases in the Magistrates' Courts, which have been less severely affected by Covid, means Crown Courts can focus their resources on tackling the backlog which has built up during the pandemic.

Deputy Prime Minister, Lord Chancellor and Secretary of State for Justice, Dominic Raab said:

This important measure will provide vital additional capacity to drive down the backlog of cases in the Crown Courts over the coming years.

Together with the Nightingale Courts, digital hearings and unlimited sitting days, we will deliver swifter and more effective justice as we build back a stronger, safer and fairer society after the pandemic.

These plans build on the significant action taken since the start of the pandemic to drive court recovery. This includes:

- Investing a quarter of a billion pounds to support recovery in the courts in the last financial year – plus over £50 million for victims and support services.
- Ensuring there is no limit on the number of sitting days the Crown Court can sit this year.
- Setting up Nightingale Courtrooms across the country to increase capacity and ensure more trials can be heard – with a commitment to extend 32 Crown court rooms that deal with criminal trials until the end of March 2022.
- Creating two state-of-the-art 'super courtrooms' which can accommodate up to 12 defendants, increasing capacity for large trials.
- Opening 3,265 Cloud Video Platform virtual court rooms across all jurisdictions. These currently hold around 13,600 hearings per week using audio and/or video hearings.

The impact of these measures is already being seen. The number of outstanding cases has dropped by around 70,000 in the Magistrates' Court since its peak in July 2020, while the caseload in Crown Court is starting to come down.

Bev Higgs, National Chair of the Magistrates' Association said:

We have been campaigning for years for magistrates' sentencing powers to be extended to 12 months for single offences, so we are delighted with the Lord Chancellor's announcement today. It is absolutely the right time to re-align where cases are heard to ensure a safe, effective, and efficient justice system and this demonstrates great confidence in the magistracy.

Magistrates have been integral in keeping the justice system functioning during the Covid-19 pandemic and, by enabling them to hear more serious offences, this new provision will mean they can

contribute to easing the pressure on the Crown Courts.

I know our members and colleagues will take up this new level of responsibility with pride, professionalism, and integrity and will – as always – strive to deliver the highest quality of justice in their courts.

## Notes to editors

- The changes will come into force in the coming months via a commencement order, signed by the Justice Secretary. They will impact England and Wales.
- Proper training will need to be completed by magistrates before this change can come into effect. This will be provided by the Judicial College.
- Today's amendment to the Judicial Review and Courts Bill will put an 'off-switch' in law so we can quickly stop the measures if needed.

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## [Up-rating report 2022 published](#)

### News story

The annual report on the National Insurance Fund projects contribution income in future financial years and is a source of information to MPs and legislators.



### Focus on the National Insurance Fund

The Government Actuary has published his [annual report on the National Insurance Fund](#) (NIF) for Great Britain. The report:

- projects contribution income, benefit payments and the balance of the NIF over the coming financial years
- is a source of information for MPs who scrutinise the government's draft legislation for up-rating social security benefits and pensions and

updating National Insurance contribution (NIC) terms

National Insurance contributions are split between the NHS and the NIF.

## **Headline results**

The Up-rating report shows the NIF is projected to be in surplus in each of next 5 years, although that surplus will generally decrease each year. The surplus in the next financial year (2022 to 2023) is projected to be £7.8 billion, which would take the NIF's balance to £60.5 billion at 31 March 2023.

These figures mean that it's not anticipated there will be any payment required to the NIF from HM Treasury over the next 5 years.

## **GAD's findings for 2022 to 2023**

The majority of benefits payable from the NIF (predominantly state pension payments), are proposed to increase by 3.1% in April in line with the September 2021 CPI increase. This results in additional NIF costs of £3.4 billion in 2022-2023.

The cost to the NIF of uprating National Insurance contribution thresholds is around £1.4 billion in 2022-2023.

## **Health and social care**

As a result of the Health and Social Care Levy Act 2021, for the 2022 to 2023 financial year there will be a temporary 1.25% rise in National Insurance contributions to raise money for the NHS.

Due to the way the calculation is performed, the extra amount paid to the NHS will be around £2.9 billion higher than the extra contributions collected. This means the NIF will lose this income in that financial year. This effect on the NIF will stop once a dedicated levy is introduced from April 2023.

## **Looking ahead**

The upcoming longer-term Quinquennial Review, which also focuses on the NIF, is due out later this year.

This more in-depth report has a 65-year projection as opposed to the 5-year outlook for the Up-rating report. GAD undertakes this more detailed review every 5 years and it looks at factors such as changes in the age structure of the UK population and changes in state pension age.

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# Statement by the Defence Secretary in the House of Commons, 17 January 2022

Thank you Mr Speaker, with your permission I wanted to update the House on the situation in Ukraine. As of today, tens of thousands of Russian troops are positioned close to the Ukrainian border.

Their deployment is not routine, and they are equipped with tanks, armoured fighting vehicles, rocket artillery, and short-range ballistic missiles.

We, and our Allies, have legitimate and real cause for concern that the configuration and scale of the force being assembled, supported by Russian air and maritime long-range strike capabilities stationed in the region, could be used for the purpose of conducting a multi-axis invasion of Ukraine.

But whatever final decision the Russian Government takes on the use of such forces, their presence and levels of readiness are contributing to a destabilising and coercive atmosphere that risks miscalculation at best and – at worst – conflict.

Furthermore, in recent weeks, we have observed hardening Russian rhetoric, heightened cyber activity and widespread disinformation that could serve to provide false pretext for a Russian military intervention.

False narratives are very much part of the Kremlin's playbook. They were used in 2008, before Russia's invasion of Georgia; and in Ukraine in 2014. False narratives are being peddled again today.

Russia has suggested that their military build-up on the border of Ukraine is in response to NATO aggression and an agenda by the West to use Ukraine to "divide and rule" the Russian nation. They have put forward this outlandish notion that NATO is attempting to encircle Russia.

Let me be clear, Mr Speaker, no one is trying to "rule" the Russian nation. Only 1/16th of Russia shares a border with a NATO Ally. And NATO is – and always has been – a defensive alliance.

NATO – at its core – holds a belief that any country in the alliance, no matter how big or how small they are, is – by right of membership – owed a pledge of mutual defence. You attack one of us, you attack us all. From 12 founding countries in 1949, the NATO Alliance has grown to a total of 30 today.

These countries have joined the Alliance not because NATO is making them do so – but because of the freely expressed will of the governments and peoples of those countries. Countries choose NATO; NATO does not choose them. If Russia has concerns about the enlargement, it should perhaps ask itself why, when people were free to choose, they chose NATO.

NATO is an Alliance of like-minded nations who, as well as sharing a

commitment to mutual defence, also share a set of common values, and sovereignty of other nations is respected by all. Each nation has a sovereign right to choose its own security arrangements. This is a fundamental principle of European security, one indeed to which Russia has subscribed in the past. And yet now Russia seeks a veto over who joins NATO.

The United Kingdom will stand up for the right of countries to choose their alliances. More important than the choice they make is the right to have that choice. On my recent visit to both Sweden and Finland, two non-NATO countries, it was clear that Kremlin attempts to dictate what sovereign states can or cannot choose had been rejected across the political spectrum.

Mr Speaker, I must stress: no one wants conflict. The Ukrainians are not seeking confrontation, despite the illegal annexation of their lands in Crimea and the occupation of Donbas. I am sure ordinary Russian people who remember the first Chechnya conflict and other older conflicts don't want yet another quagmire either.

Last week there were intensive discussions on the international front to achieve a diplomatic solution to the current situation, including at NATO and the Organisation for Security and Cooperation in Europe (OSCE).

Engagement at the NATO-Russia Council made it clear that NATO is open to dialogue with Russia on a range of issues to protect Euro-Atlantic security, including risk reduction, transparency, arms control, and lines of communication. But we will not reward aggression.

And we are open to dialogue on a bilateral basis.

On 23 December, the Chief of the Defence Staff Admiral Tony Radakin spoke with his Russian counterpart, General Gerasimov. In their call, they agreed the vital importance of maintaining communications to understand each other's intentions and to avoid miscalculation.

When the Prime Minister spoke to President Putin on 13 December, he expressed the United Kingdom's deep concern over the build-up of Russian forces on Ukraine's border, and also reiterated the importance of working through diplomatic channels to de-escalate tensions and identify durable solutions.

The Foreign Secretary continues to engage with her Russian Foreign Minister Sergei Lavrov, including recently in person at the margins of the OSCE Ministerial Council in Stockholm on 2 December.

Russia has the largest conventional forces of any single nation in Europe. It has a proud history. We have fought together. We celebrated the courage of the Arctic Convoys and their 80th anniversary last year. And Russia is a nuclear power. It does not have anything to fear from NATO or Ukraine or the other countries that strive peacefully on the continent of Europe.

So, today, I am extending an invitation to my Russian counterpart, Sergei Shoigu, to visit London in the next few weeks. We are ready to discuss issues related to mutual security concerns and engage constructively, in good faith.

The UK's position on Ukraine is also clear. We unequivocally support its sovereignty and territorial integrity within its internationally recognised borders, including Crimea. Ukraine is an independent, sovereign country of proud, independent Ukrainian people.

The UK Ministry of Defence already has a longstanding relationship with our Ukrainian counterparts, and we continue to provide support in many areas including security assistance and defence reform.

Since 2015, the UK has helped to build the resilience and capabilities of the Ukrainian armed forces through Operation ORBITAL, which has trained over 22,000 Ukrainian troops. And we maintain the right to deliver bilateral support to a sovereign nation when requested, in areas that will better help them defend themselves.

It is important that Ukraine has the capability to defend itself. After Ukraine lost large parts of its navy to Russia's illegal occupation of Crimea, it became important to help Ukraine build up and sustain a naval capability.

We should not forget, Mr Speaker, the thousands of Ukrainians who have lost their lives defending their country, and who every day are murdered by snipers from across the divide.

That is why in 2019 I expanded Operation ORBITAL to include naval cooperation. And that is why last year we agreed a range of measures including supplying Ukraine with two mine counter-measure vessels as well as agreeing the joint production of eight new ships – equipped with modern weapons systems. Defensive weapon systems.

As I said in this House last week, the Framework Agreement presented to Parliament in November 2021 affirmed the principle that the UK will provide both training and defensive capabilities to Ukraine – to help them better defend themselves.

Within that same principle, I can today confirm to the House that, in light of the increasingly threatening behaviour from Russia, and in addition to our current support, the UK is providing a new security assistance package to increase Ukraine's defensive capabilities.

We have taken the decision to supply Ukraine with light, anti-armour, defensive weapon systems. A small number of UK personnel will also provide early-stage training for a short period of time, within the framework of Operation ORBITAL, before then returning to the United Kingdom.

This security assistance package complements the training and capabilities that Ukraine already has, and those that are also being provided by the UK and other Allies in Europe and the United States. Ukraine has every right to defend its borders, and this new package of aid further enhances its ability to do so.

Let me be clear: this support is for short-range, and clearly defensive weapons capabilities; they are not strategic weapons and pose no threat to



Russia. They are to use in self-defence and the UK personnel providing the early-stage training will return to the United Kingdom after completing it.

The Prime Minister has been clear that any destabilising action by Russia in Ukraine would be a strategic mistake that would have significant consequences. That is why there is a package of international sanctions ready to go that will make sure that the Russian government is punished if it crosses the line. But the costs of an invasion will not just be felt by the West.

I have visited Ukraine five times since 2016, and I know that the Ukrainians are a proud people who will stand and fight – for their country, for democracy and for freedom.

Any invasion will not be viewed as a “liberation” but as occupation, and I fear that it could lead to huge loss of life on all sides.

The current difficult relationship with the Kremlin is not the one we wish to have in the United Kingdom. It does not have to be this way. The United Kingdom respects the people, culture and history of Russia.

We have more in common than we may think – culturally, historically and technologically. We wish to be friends with the Russian people as we have been for hundreds of years.

And there is a world in which we can establish a mutually beneficial relationship with Russia, working together on shared areas of interest and addressing mutual security concerns. This current gap is wide but not unbridgeable.

I still remain hopeful that diplomacy will prevail. It is President Putin’s choice; whether to choose diplomacy and dialogue or conflict and the consequences.

But Russia’s current behaviour is not only threatening the sovereignty of a proud nation state; it is also destabilising the rules-based international order and challenging the values that underpin it.

That is why it is all the more important that we stand in solidarity with those who share our values: including our NATO Allies and partners like Sweden, Finland, and Ukraine.

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## [HM Coastguard celebrates landmark birthday](#)

It was on 15 January 1822, that HM Coastguard was formally brought into

existence and has been working to keep people safe at the coast and sea ever since.

On Saturday (15 January), coastguards across all four home nations cast throwlines as a symbol of the service's dedication – past and present.

Throwlines, which form part of the lifesaving kit used by coastguard teams, were cast into the seas around Scotland, England, Wales and Northern Ireland.

UK Government Minister for Scotland Iain Stewart said:

With 87 stations across Scotland, supported by nearly 800 volunteers, HM Coastguard plays a vital role in keeping people safe on our coastlines and at sea.

On behalf of the UK Government and people of Scotland and around the UK, I'd like to pay tribute to the bravery of our coastguards and thank them for the many lives they save. Happy 200th birthday.

Divisional Commander for Scotland, Susan Todd said:

As an emergency service HM Coastguard is always busy and it's rare that we get the chance to reflect on how far we have come. 200 years of saving lives at sea and at the coast is truly something to be proud of.

The symbolic casting of throwlines across the UK is a reflection of our unwavering commitment to keeping people safe at sea.

Over the past two centuries, HM Coastguard has gone from strength to strength. In 2022, coastguard operations centres will coordinate responses to emergency situations at the coast calling on 310 Coastguard Rescue Teams – made up of 3500 dedicated volunteers – and using 10 search and rescue helicopter bases.

In Scotland there are 113 Coastguard Rescue Teams and 923 Coastguard Rescue Officers.

Last month (December) HM Coastguard began to implement its new updated search and rescue radio network which uses fibre technology. More than £175million has been invested to upgrade the Coastguard's national radio network across all 165 sites over the next two years. This will improve and future-proof its communication infrastructure and ensure that it remains able to communicate and exchange data quickly and reliably in order to co-ordinate rescues and save lives.

The service continues to adapt to changes – in the last few years providing mutual aid and support during events and incidents to other emergency partners. During the pandemic, coastguards supported the NHS, attended the G7

and COP26 in 2021, and are called in to support during national emergencies including flooding or supplying water to stranded drivers.

The service is currently working hard to reduce its carbon footprint and is aiming to make its UK-wide fleet of vehicles electric wherever possible over the next five years.

Following trials, six electric vehicles have already been purchased, with 19 more currently being procured for use across the UK. Opportunities to electrify the fleet where operationally possible continue to be identified, with the trialling and integrating of electric models as they arrive on the market.