

The Secretary of State for Transport  
c/o Transport Infrastructure Planning Unit  
Great Minster House  
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London  
SW1P 4DR

**Date:** 30 July 2021  
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Dear Sirs,

**OFFICIAL – SENSITIVE: The Network Rail (Cambridge South Infrastructure Enhancements) Order ("the Order")**

**Transport and Works Act 1992**

**Objection by the Medical Research Council**

We are retained by the Medical Research Council ("MRC") in relation to the above Order.

MRC have a long ground lease (170 years, commenced 1 January 2008) of the MRC Laboratory of Molecular Biology, Cambridge ("LMB") ("the Site") which is affected by the Order.

**Background**

The LMB is dedicated to understanding important biological processes at the levels of molecules, cells, tissues, organs and organisms. The sole purpose of the LMB is to uncover molecular knowledge needed to solve key problems in human health. The LMB's molecular focus is based on the premise that life is most usefully understood when it can be explained by the universal laws of physics and chemistry. These principles govern the processes and evolutionary mechanisms that underlie much of biology, including our own. To exploit the foundational knowledge of molecular biology, the LMB also invents biology-inspired technologies aimed at improving our lives.

The LMB is one of the birthplaces of molecular biology and throughout its 70-year history it has continued to make revolutionary and ground breaking contributions to science. For example, methods to determine protein structures by X-ray crystallography (*Kendrew and Perutz*), sequence nucleic acids (*Sanger*), visualise biological structures with three-dimensional electron microscopy (*Klug*), trace animal development (*Brenner, Horvitz and Sulston*), and determine macromolecular structures by electron cryomicroscopy (cryo-EM, *Henderson*) each opened up large vistas of biology for exploration.

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Work at the LMB on the structures of DNA (*Watson and Crick*), ATP synthase (*Walker*), and ribosomes (*Ramakrishnan*), have provided explanations for some of life's most essential processes. The development of methods to produce monoclonal antibodies (*Köhler and Milstein*) and engineer them (*Winter*) led to a new class of widely-used antibody-based therapeutics. Thus, the LMB has, with great consistency, provided deep insights and useful technologies that have transformed biology, medicine and even society. Twelve Nobel Prizes have been awarded for work carried out by LMB scientists based at the LMB.

The LMB provides an unsurpassed environment for both young and established researchers, with state-of-the-art facilities and a unique scientific culture.

The LMB promotes the application and exploitation of those research findings, both by collaboration with existing companies and the founding of new ones, helping to advance medical research and the translation and application of knowledge.

In its facilities, the LMB operates a range of extremely sensitive and complex equipment, such as TITAN KRIOS Electron Microscopes. The works and associated impacts as well as the future operation of the station itself (identified further in this letter) can result in these multi-million pound investments being unusable for research activity either as results are not reliable or the function of the equipment and associated services being compromised. There are, furthermore, specialist facilities operated in the building, in which experimentation is regulated by Home Office licenses and are highly sensitive to vibration.

The LMB has also plans for expansion in the next 3-5 years, which may be infringed by the construction activities and/or restricting the scheme itself.

MRC is concerned that if its land is acquired by Network Rail pursuant to the Order, the LMB will no longer be capable of carrying out its processes and functions to the fullest extent necessary which will have a considerable impact on the vital role that the LMB has on a national and international level.

## **Objection**

We are instructed to object to the Order on behalf of MRC for the reasons set out below.

## **MRC's interests in the Order**

MRC is the leasehold owner of Plots 020,021, 022, 029, 030, 037, 038, 044

## **Impacts on MRC**

The Order seeks the temporary and permanent acquisition of the land in the plots referred to above.

Whilst the land take appears to include a relatively small area on the Order plan, the impacts on the operational requirements of the LMB are considerable due to the highly sensitive nature of the work that is undertaken at the laboratory as explained above.

We set out below a non-exhaustive list of the impacts that MRC consider the works that will be authorised pursuant to the Order will have on the LMB.

### Vibration from the Construction Works

The LMB has been specifically designed to ensure that it is virtually vibration free such that any vibration sensitive equipment (for example the electron microscopes) and/or experiments can be undertaken almost anywhere within the footprint of the building.

Any amount of vibration has the potential to create problems with the performance and reliability of sensitive scientific equipment including high resolution confocal and electron microscopes and even the slightest amount of vibration can critically impact the efficacy of the experiments meaning they would need to be run again or put on hold for the period when the vibrations are being experienced. Many experiments are conducted over very prolonged periods of time. They could take many weeks to re-run if disturbed which would come at a great cost both financially and with regards to the importance and urgency of the work being undertaken.

### Electromagnetic Interference

MRC has concerns about the potential for increased electromagnetic interference from the HV/MV cabling to be located at a close proximity to the LMB which also may impact scientific equipment in close proximity to those cables.

### Generation of Dust and Dirt

The equipment and systems in the LMB are highly sensitive and rely on high-efficiency air filtering (which prevents the influx of very small particles into the facility) to protect equipment but also to prevent pathogens to be released into the environment.

The dust and dirt that will be produced by the construction and associated enabling works will result in significant increases of operational cost due to the need to change these filters more frequently and also increases the risk of the MRC breaching strict environmental controls.

### Noise

The LMB is home to a large number of mice which are used in some of the experiments carried out on Site. The mice are highly sensitive to noise (as well as vibration and dust). Excess noise has an impact on the breeding regimes of the mice, such regimes being key to the experiments that are undertaken.

### Tree Line

We note that a tree line that was required by the planners to screen the laboratory is also to be removed by the works authorised by the Order. The planners may require the tree line to be replaced.

### Impact of the Haul Road and on-going Rights of Access for Maintenance

The access via the proposed haul road during the construction period and via the MRC car park for the on-going future maintenance of the railway will have an impact on any deliveries to the LMB, maintenance works carried out on site, and collections.

The front entrance (between the two buildings) will therefore, during construction, become the main access to the rear of the site. HGV's and LGV's will have to pass

the part of the building where the sensitive electron microscopes are located. This is unacceptable as the route and building layout is neither designed nor intended for that purpose.

The MRC have concerns about the safety of staff accessing and egressing through staff carpark during the construction of the haul road and the impact of the loss of car parking spaces. The MRC do not consider it reasonable for its staff to have to share an access to LMB's car park with construction traffic and future maintenance traffic, the nature of which (and therefore its associated impact) is unknown.

The southern edge of the Site has recently been developed to include staff seating areas for their enjoyment in the biodiverse "paddock". The location of the haulage road will significantly impact on this area and therefore staff amenities and welfare.

#### Drainage

Part of the land to be acquired by Network Rail is a ditch area that is part of the drainage plan for the site and designed to cope with a 1 in 50 year flood event. This would need to be re-provided somewhere else on Site.

#### Goods delivery and service access for the LMB

There are multiple deliveries each week of, for example, liquid nitrogen, scientific equipment and hazardous materials. Similarly, there are multiple collections of hazardous waste for disposal. It is vitally important therefore that the delivery vehicles enjoy uninterrupted access to the LMB at all times. We understand that land that is being acquired by Network Rail adjoins this delivery route and the route itself may become heavily disrupted during the construction period.

#### Future Power provision for the LMB

The LMB building has been built as a state-of-the-art facility at huge expense and built to be as future-proof as possible. MRC is likely to want to enhance its research within the existing building in the future or further develop its land. There is a concern that the additional power delivery available to the site may be adversely impacted by the station developments.

#### Utility diversions

MRC are concerned that the works authorised by the Order may have a detrimental impact on, or interrupt, the utilities serving the LMB which are absolutely vital to its operation.

#### Biodiversity

MRC are very conscious of the impact of science on the natural environment and is driving the development and expansion of better external environments and biodiversity on our sites. The works proposed (both temporary and permanent) will involve removing part of the established green area. This will have an impact on biodiversity on the site and wider area. A full biodiversity survey will be required to establish the existing flora and fauna to consider impact and mitigation of the scheme.

## Security

The western perimeter of the Site currently has anti-climb fencing, CCTV systems and external lighting which all contribute to controlling the security of the Site and it is an area that will be impacted by the works authorised by the Order. There are many highly sensitive experiments undertaken at the LMB and therefore security is of paramount importance not only in order to protect the conducting of the experiments but also to ensure the safety of the staff members working on those projects.

Whilst there have been some discussions concerning the potential mitigation measures that Network Rail will put in place, these arrangements are not certain and have not been documented. As such, there is no guarantee at this stage that MRC would be able to carry out all of its operations at the LMB without being adversely impacted to the extent that some of the operation may have to halt or move off-site.

## **Alternatives Not Considered**

The proposed access route to be used during the construction of the new railway line and for its future maintenance appears to be predominantly on the "LMB side". We have not been provided with any information to show that any alternative access routes were considered and the reasons for those alternative routes being discounted.

## **Required Mitigation**

If MRC's land included in the Order is acquired, then MRC's operations as described above will not be capable of being carried out safely, efficiently and (with regards to the experiments) efficaciously. This would be unacceptable and could result in a very significant adverse impact on the nationally significant work undertaken at the LMB, which has already experienced a great deal of setbacks during the last 18 months because of the pandemic.

In order to seek to mitigate the impacts on the LMB, MRC would need to work very closely with Network Rail so that they can be assured that all of the impacts outlined above will be mitigated to the greatest extent possible with further measures being put in place, if necessary, to ensure the safe and efficient operation of the LMB during the construction period, maintenance works, and ongoing use of the new railway line.

Network Rail will need to demonstrate, via the production of a detailed method statement, and construction and maintenance management plan (amongst other documents) that the works authorised by the Order and the subsequent movement of large metal parts, plant, and machinery during the construction process and thereafter would not lead to the impacts described above, and if they do, what mitigation measures will be put in place. MRC would also want any works carried out to be co-ordinated, to ensure the safe and efficient continuation of the operations and processes at the LMB.

There will also need to be appropriate drainage measures put in place with Network Rail providing satisfactory details of the revised drainage and surface water management measures that shall be implemented on the Site.

Appropriate security measures will need to be put in place to ensure that security at the Site is not compromised in any way.

MRC also request that an electromagnetic study is undertaken with regards to the laying of cables.

The health and safety of those working at and visiting the LMB must not be compromised by the works authorised by the Order. This particularly includes the separation of pedestrian, cyclist and vehicles across the Site. It will be vitally important therefore for Network Rail to work very closely with MRC in this regard during the construction and maintenance phases.

Owing to the need for satisfactory long-term access arrangements to be in place, a detailed traffic management plan will need to be agreed between Network Rail and MRC for the period of construction and when any future maintenance is carried out.

There will also be a need to screen the LMB from the new railway line (see above impact of the tree removal), including the delivery of appropriate landscaping works.

All of the above matters (and any further matters that come to light on the review of any further information received by MRC) will need to be agreed and documented before MRC can withdraw its objection to the Order.

## **Negotiations**

The Government's Guidance on Compulsory Purchase (October 2015/updated February 2018) states at paragraph 2 that before a compulsory purchase order is made the authority should take reasonable steps to acquire the relevant land by agreement, and that compulsory purchase should be seen as a "last resort".

Whilst there have been initial discussions between Network Rail and MRC regarding the impacts of the new line on MRC's operations and the necessary mitigation, these discussions are far from advanced.

However, there is the potential that an agreement could be reached to give effect to the above arrangements if sufficient time had been allowed before the Order was promoted, but as yet no draft agreement or even draft heads of terms have been prepared. As such, Network Rail's application to the Secretary of State is premature and should be refused so as to allow the parties an opportunity to negotiate and seek to put in place an appropriate legal agreement dealing with the matters referred to above.

## **Funding and Viability**

It is not clear whether Network Rail appreciates the costs associated with the works required to mitigate the impacts on the LMB so as to enable the operations to continue safely and efficiently.

## **Conclusion**

In conclusion, MRC objects to the Order.

As explained above if an appropriate agreement is entered into which satisfies the matters raised in objection by MRC, then they would be minded to withdraw the objection. However, until such time as an agreement is entered into, MRC have no option but to object to the Order in the strongest possible terms.

Unless an agreement is reached with MRC which allows for the continued safe and efficient operation of the LMB, the adverse impacts on the LMB and its operations are such that Network Rail has not made out a compelling case in the public interest for the confirmation of the Order.

### **Further Information**

We reserve the right to add to the grounds of the objection if new matters come to light which require it.

Kindly acknowledge safe receipt of this objection letter.

In the meantime, should the Secretary of State have any queries please do not hesitate to contact Chris Robinson of these offices.

We look forward to hearing from you in due course with details of any public inquiry to be held in connection with the Order.

Yours faithfully,

*Eversheds Sutherland (Int) LLP*

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