

**TRANSPORT AND WORKS ACT 1992
TRANSPORT AND WORKS (INQUIRIES PROCEDURE) RULES 2004
DEPARTMENT FOR TRANSPORT REF.: TWA/21APP/04/OBJ/9**

**APPLICATION FOR THE PROPOSED NETWORK RAIL (CAMBRIDGE SOUTH
INFRASTRUCTURE ENHANCEMENTS) ORDER**

**STATEMENT OF CASE ON BEHALF OF THE
MEDICAL RESEARCH COUNCIL**

1. Introduction

- 1.1 This is the Medical Research Council's ("MRC") statement of case made pursuant to Rule 7 of the Transport and Works (Inquiries Procedure) Rules 2004 ("the Inquiry Rules") in relation to its objection to the proposed the Network Rail (Cambridge South Infrastructure Enhancements) Order ("the proposed Order").
- 1.2 MRC submitted a detailed objection to the proposed Order on 30 July 2021. The proposed Order, if confirmed, would amongst other matters authorise the compulsory acquisition of land in which MRC has an interest.
- 1.3 By letter dated 4 August 2021, the Secretary of State for Transport gave notice to the MRC of his intention to hold a public inquiry in respect of the proposed Order under Rule 4 of the Inquiry Rules; and requiring the MRC to submit a Statement of Case under Rule 7 of the Inquiry Rules by 15 September 2021.
- 1.4 This Statement of Case is based upon the matters raised in the MRC's objection dated 30 July 2021 and sets out the case the MRC will put forward at the public inquiry.
- 1.5 MRC do not object to the proposed Order in principle. However, it has real concerns in relation to impacts from both construction and operation on its own business. In summary, the MRC objects to the proposed Order on the following grounds:
 - 1.5.1 Vibration from the Construction Works;
 - 1.5.2 Electromagnetic Interference;
 - 1.5.3 Generation of Dust and Dirt;
 - 1.5.4 Noise;
 - 1.5.5 Impact of the Haul Road and on-going Rights of Access for Maintenance;
 - 1.5.6 Drainage;
 - 1.5.7 Goods delivery and service access for the LMB;
 - 1.5.8 Future Power provision for the LMB;
 - 1.5.9 Utility diversions;

1.5.10 Biodiversity; and

1.5.11 Security.

2. **The MRC**

The MRC, along with the other research councils, is now a constituent part of UK Research & Innovation, a public body established by an Act of Parliament in 2018. Prior to this it was a non-departmental government body in its own right. MRC's aim is to *"improve human health through world-class medical research, from fundamental science to early clinical trials and preventive medicine"*. MRC's mission is to:

2.1.1 encourage and support research to improve human health;

2.1.2 produce skilled researchers;

2.1.3 advance and disseminate knowledge and technology to improve the quality of life and economic competitiveness of the UK; and

2.1.4 promote dialogue with the public about medical research.

2.2 The MRC undertakes a broad range of work from laboratory research to research with people, such as clinical trials and population studies. It has six broad areas of research which are: infections and immunity, molecular and cellular medicine, neurosciences and mental health, population and systems medicine, global health and translational research.

Laboratory of Molecular Biology

2.3 One of the MRC's facilities is the Laboratory of Molecular Biology in Cambridge (the "LMB"). It is this facility which is impacted by the proposed Order. 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.

2.4 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.

2.5 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.

2.6 The LMB promotes the application and exploitation of its 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.

2.7 In its facilities, the LMB operates a range of extremely sensitive and complex equipment, such as TITAN KRIOS Electron Microscopes.

2.8 The LMB has plans for expansion in the next three to five years, which may be infringed by the construction activities and/or the scheme itself.

3. **The proposed Order**

3.1 Network Rail ("NR") has applied to the Secretary of State for Transport for an order which authorises the following works:

3.1.1 Deemed planning permission for works including:

3.1.1.1 A new railway station with four platform faces including forecourts, access paths and limited vehicle parking, new interchange for taxi and pick up/drop off points and cycle parking spaces together with associated works;

3.1.1.2 2 additional loop lines on West Anglian Main Line in the area of the new station;

3.1.1.3 Track replacement/modification/additional loop line to the West Anglian Main Line;

3.1.1.4 New overhead line equipment and improvement works at Shepreth Junction and replacement of the GSMR mast;

3.1.1.5 New permanent rail systems compound and associated works to the south-west of Addenbrooke's Road; and

3.1.1.6 Attenuation ponds and drainage works.

3.1.2 The compulsory acquisition of land, new rights and temporary possession of land to facilitate the construction and maintenance of the works;

3.1.3 Closure of Dukes no.2 level crossing and Webster's level crossing over the West Anglian Main Line at Shelford and extinguishment and diversion of the existing private access over the crossing;

3.1.4 Acquisition of replacement land for exchange open space land; and

3.1.5 Powers to carry out works to streets including the temporary diversion of streets.

3.2 The proposed Order includes powers of compulsory acquisition (Article 19) and power to acquire new rights (Article 22). Schedule 3 identifies land over which only the power to acquire rights would be granted.

4. **MRC's Interest in the Order Land**

4.1 MRC is the leasehold owner of Plots 020, 021, 022, 029, 030, 037, 038, 044 pursuant to a long lease (170 years, commenced 1 January 2008) dated 29th July 2008 between Antony Francis Pemberton (landlord) and the MRC.

4.2 All of these plots, save for 020, are included within Schedule 3 to the proposed Order and, as such, would only be subject to the acquisition of new rights.

4.3 Column 3 of Schedule 3 identifies the purpose for which rights over these plots can be acquired as follows: *"To pass and repass over Francis Crick Avenue and Robinson Way for purposes to access the station for Network Rail and its licensees, and access for construction of authorised works including construction of new station."*

4.4 All of the plots in which the MRC has an interest comprise parts of Francis Crick Avenue and Robinson Way. It is not clear to MRC why plot 20 should be treated in any other way from the other plots in which it has an interest. Indeed, Plot 20 is identified as a plot over which the powers are limited to the acquisition of rights on Sheet 2 of 10 of the Order Plans. There appears, therefore, to be some inconsistency between the proposed Order and Order Plans.

5. **MRC's objection**

- 5.1 As set out above, MRC does not object to the principle of the proposed Order and the new station NR seeks to develop. However, the construction and operation of the proposed development could materially affect the operation of the LMB and, in particular, could prevent the proper and reliable functioning of the sensitivity equipment that the LMB's work relies upon and, as a result, compromise the MRC's important work.
- 5.2 The Stakeholder Information Pack October 2020 indicates that the following works will be close to the LMB during construction:
- 5.2.1 A construction compound ("CC4") to the north of the LMB (on the other side of the railway). This is described at paragraph 6.3.4 as follows: *"On the Down side adjacent to Addenbrooke's Bridge carrying the Guided Busway to facilitate construction of the Down Loop and to crane in elements of the S&C for the Up Loop. This will be a satellite compound"*;
- 5.2.2 An access road ("AR4") immediately to the west of the LMB described in paragraph 6.4.5 as *"From AR4 along the eastern toe of the Guided Busway north embankment There is no existing path, and an unmetalled road would be required for the duration of the work. This road may need to cross a swale assumed to be required for the Guided Busway drainage. In this case, a temporary pipe crossing would be used"*; and
- 5.2.3 A haul road ("HR5") immediately adjacent and to the north of the LMB described in paragraph 6.5.5 as *"long the Up side railway boundary to the east of the railway along the rear of the Medical Research Council Laboratory site"*.
- 5.3 The latter in particular has the potential to impact on the LMB's sensitive laboratory equipment.

Vibration from construction works and ongoing use

- 5.4 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.
- 5.5 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.
- 5.6 NR accept that its proposals would have a significant adverse effect on the LMB during construction. The MRC do not accept that the impact would be "Not Significant" during the operational phase.
- 5.7 The conclusions of Chapter 6 of the Environmental Statement (Vibration) are set out below:

Receptor	Potential Significant Effect	Phase (Construction (C), Operation (O))	Mitigation Measure	Residual Effect Significance
MRC-LMB	Adverse impact on operation of scientific facility during construction phase	C	<p>Best Practicable Means to be implemented in line with Code of Construction Practice</p> <p>Key BPMs:</p> <ul style="list-style-type: none"> - No vibratory piling - Well constructed and maintained haul road - Low vibration construction techniques - Enhanced consultation and engagement - Vibration monitoring with real-time feedback 	Significant (for scientific operation during some construction activities)
	Adverse impact on operation of scientific facility during operational phase	O	The option of vibration mitigation at the receptor is being explored by Network Rail with the MRC-LMB and will be considered in addition to the source mitigation options.	Not Significant

Electromagnetic Interference

- 5.8 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 Dust and Dirt

- 5.9 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.
- 5.10 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

- 5.11 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.

- 5.12 NR accept that its proposals would have a significant adverse effect on the LMB from construction noise. Chapter 5 of the Environmental Statement (Noise) identifies the LMB as "NML3" and concludes that construction noise would have a major impact on the LMB which is has a high sensitivity and as such would have a large to very large adverse and significant effect (paragraph 5.4.11). Mitigation is predicted to reduce the residual effect to moderate or large adverse effect which is still a significant (paragraph 5.6.10).

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

- 5.13 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.
- 5.14 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. NR have provided verbal assurances that they would not require exclusive use of the access route during their temporary use of it however nothing has been provided in writing nor has a draft traffic management plan been issued for MRC to review and input into.
- 5.15 The MRC has 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.
- 5.16 The southern edge of the LMB 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

- 5.17 Part of the land to be acquired by NR 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.

Goods delivery and service access for the LMB

- 5.18 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. The MRC understand that land that is being acquired by NR adjoins this delivery route and the route itself may become heavily disrupted during the construction period.

Future Power provision for the LMB

- 5.19 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

- 5.20 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

- 5.21 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 its 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

- 5.22 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.
- 5.23 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.

Other matters

Alternatives Not Considered

- 5.24 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

- 5.25 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.
- 5.26 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.
- 5.27 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.
- 5.28 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.
- 5.29 Appropriate security measures will need to be put in place to ensure that security at the Site is not compromised in any way.
- 5.30 MRC also request that an electromagnetic study is undertaken with regards to the laying of cables.

- 5.31 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.
- 5.32 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.
- 5.33 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.
- 5.34 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.

Failure to approach compulsory acquisition as a last resort

- 5.35 Paragraph 2 of the Government's Guidance on Compulsory Purchase (October 2015/updated February 2018) states 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".
- 5.36 Whilst there have been discussions between Network Rail and MRC regarding the impacts of the proposed development on MRC's operations and the necessary mitigation, these discussions are far from advanced.
- 5.37 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.
- 5.38 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

- 5.39 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.

6. **Conclusion**

- 6.1 For the reasons set out above, the MRC objects to the proposed Order. 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.
- 6.2 The Secretary of State's guidance "A Guide to TWA Procedures" at paragraph 1.39 makes clear that before confirming the Order the Secretary of State will need to be satisfied that: "*there is a compelling case in the public interest for taking away someone's land or rights in land.*" Reference is made in that document to Circular 06/2004 which has now been superseded by the MHCLG guidance "*Guidance on Compulsory Purchase Process and Crichel Down Rules*" (February 2018). Section 12 of this Guidance repeats that "a compulsory purchase should only be made where there is a compelling case in the public interest".
- 6.3 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.

- 6.4 MRC reserve the right to add to this statement of case if new matters come to light which require it.

Eversheds Sutherland (International) LLP

15 September 2021