TECHNICAL NOTE

Manchester Digital Campus - Government Property Agency

SUBJECT	PROJECT NO.	DATE
Rejection Lane Junction Arrangement	100096142	4th February 2025

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Document history

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1. Introduction and Context

A planning application ref 141607/FO/2024 has been lodged with Manchester City Council for the development of a new office campus comprising two office buildings (Use Class E) with some limited parking on-site for disabled users, plus cycle parking and servicing on part of the former Central Retail Park on Great Ancoats Street in Ancoats, New Islington. This new development is referred to as Manchester Digital Campus (MDC) and is being developed by the Government Property Agency (GPA).

As part of the proposals access to the site is through an eastbound-only left-in/ left-out either side of the existing Laystall Street junction with Great Ancoats Street, as well as a rejection lane between the first and second security barriers; this lane directs traffic directly into the Laystall Street junction.

This Technical Note considers the arrangement of a rejection lane for traffic not permitted to enter the site.

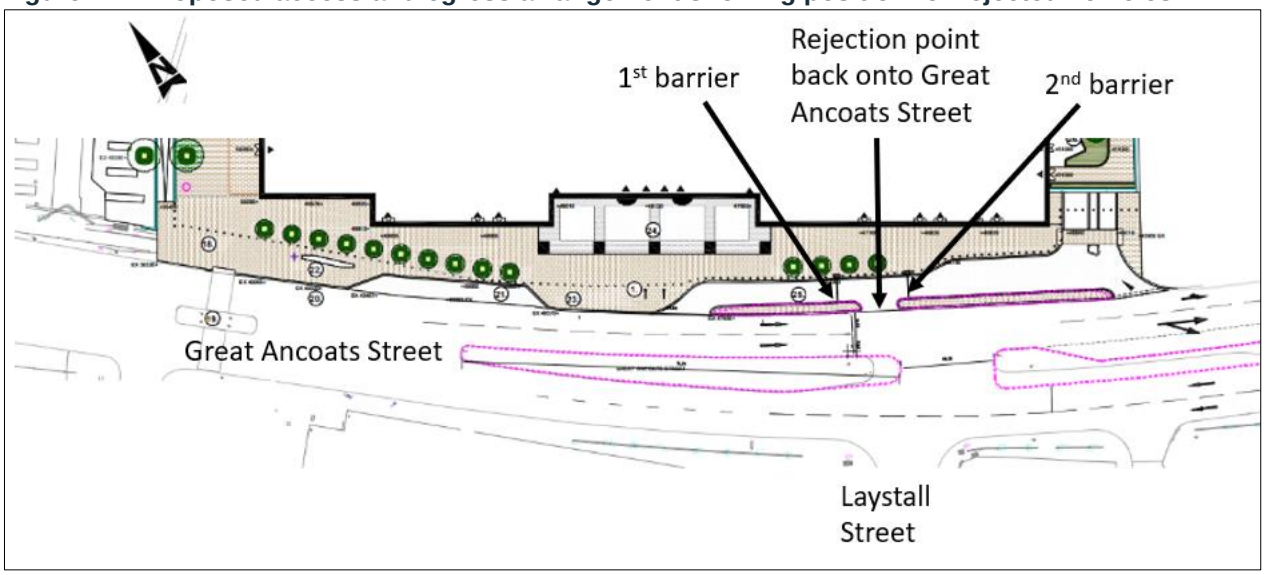
In summary the proposal is to introduce a new stage into the signalised junction for the rejected traffic, called manually by security staff at the campus.

2. Development of proposed arrangement

2.1 Signal arrangement

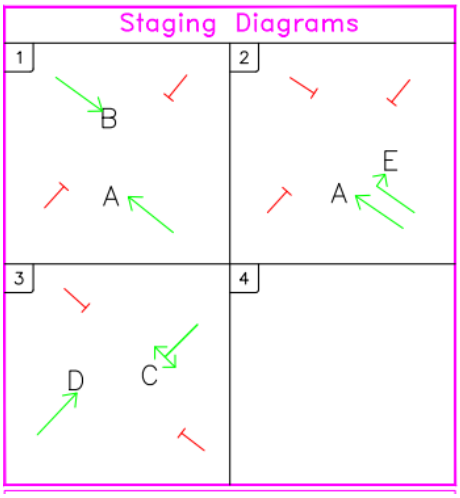
The existing junction comprises four signalised arms; two for each arm of Great Ancoats Street, one for Laystall Street and a fourth arm currently controlling a stopped-up stub of the former Central Retail Park. The proposals for the Manchester Digital Campus to replace the stopped-up stub becoming a new junction with 3 major arms (Great Ancoats Street east and west, and Laystall Street, with the site's rejection lane being the fourth minor arm. All traffic into the site occurs west of the Great Ancoats Street west stop line, and returning traffic does so shortly after and the east of the junction as shown in Figure 2-1.

Figure 2-1: Proposed access and egress arrangement showing position for rejected vehicles



The junction currently operates in 3 traffic signal stages as shown in Figure 2-2.

Figure 2-2: Traffic signal staging for existing Great Ancoats Street/ Laystall Street junction



In summary the phases in each of the three stages are:

- Stage 1:
  - Phase A - Great Ancoats Street east ahead only; operating with
  - Phase B – Great Ancoats Street west
- Stage 2:
  - Phase A – Great Ancoats Street east ahead only; operating with
  - Phase E – Great Ancoats Street east right only (into the stopped-up stub, formally access to Central Retail Park
- Stage 3;
  - Phase C – Former egress from Central Retail Park; operating with
  - Phase D - Laystall Street.

The location of the rejection lane directing traffic into the Laystall Street junction would require its own green signal aspect. Although it could be called at the same time as the Laystall Street green in Stage 3 or the Great Ancoats east greens in Stage 2 (as the right turn into the former retail park is now obsolete and will continue to be obsolete under the MDC proposals), as it is unlikely to be required on a frequent basis it is suggested that this green aspect forms its own stage. This would prevent drivers who, having become familiar with the proposed layout from operating without the rare occurrence of this green aspect for rejected vehicles, would occasionally having to adjust their behaviour to account for such an event.

It is anticipated that the impact of rejected vehicles would be minimal. First, as the occurrence of a rejected vehicle would be infrequent, the green aspect would not be required in every signal cycle. Secondly, the green aspect would only be needed for one vehicle at a time so that the green would only be needed for a minimum time. Finally, the junction is anticipated to operate well within capacity and additional instances of rejected vehicles are not considered to impact materially on junction operation.

2.2 Detection and Control

For the green aspect to be invoked for rejected vehicles the vehicle would need to pass the first barrier whilst the second barrier remains closed. There is no room for induction loops in the area between the two barriers to determine if a vehicle is rejected as this area of road space is also required for accepted vehicles. Similarly radar detection may not be able to differentiate between accepted and rejected vehicles. It is also not possible for rejected vehicles to continue parallel to Great Ancoats Steet to use the proposed left out exit given the risk to the property. It is therefore proposed that security staff will manually call the green traffic aspect at the time the first barrier is opened, and wait in the area between the two barriers until the green phase is activated.