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Growth and Capacity Forecast

EMC Rail Officer Support

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EXECUTIVE SUMMARY

This report investigates the capacity of weekday passenger rail services operating within the East Midlands region in order to identify where improvements should be focussed. Three scenarios are considered:

- Base year 2019;
- Future year 2030 (with committed rolling stock enhancement but no growth); and
- Future year 2030 (with committed rolling stock enhancement and growth).

Summary and recommendations

As a result of the capacity issues which the report forecasts, it is recommended that the following options are considered.

Base year 2019/Future Year 2030 (no growth, assumes patronage recovers to 2019 level)

- Recommended that the improved rolling stock is put in place, this mitigates the current (2019) significant capacity issues on most East Midlands Railway (EMR) and Northern Trains (Northern) services. Further work and consultation with Train Operating Companies (TOCs) is required to assess whether the assumed rolling stock is possible.
- Further consultation with CrossCountry to investigate any opportunities to alleviate capacity issues on their services through the East Midlands. A significant number of passengers expected to be standing between Derby and Nottingham, Nottingham and Birmingham, and Derby and Birmingham on several services.

Future Year 2030 (with growth)

- EMR / Northern – There are several Northern and EMR services between Sheffield-Chesterfield and Chesterfield-Nottingham which are expected to operate over 80% and in numerous cases over 100% in the growth scenario. Further analysis for capacity improvement on both the EMR Liverpool-Norwich and the Northern Sheffield/Leeds-Nottingham services should be undertaken to mitigate this risk. This could be either through frequency increase and/or train length type capacity improvement (e.g. EMR 6-car).
- EMR - Half hourly services from Worksop to Nottingham in the AM peak (0700-1000) and from Nottingham to Worksop in the PM peak (1500-1800).
- EMR – Additional AM peak departure or higher capacity train (0731) from Peterborough to Doncaster.

- EMR – Additional PM peak departures or higher capacity trains (1539, 1643 and 1743) from Leicester to Grimsby Town. Increased capacity trains used on the 0824 Nottingham-Leicester and 1438 Grimsby-Leicester services.
- Northern – Although highlighted above, there is expected to be significant capacity issues between Nottingham and Sheffield during peak periods which could warrant additional services (e.g. 1730 Nottingham departure and 1730 Sheffield departure).
- CrossCountry as above, as well as between Birmingham and Leicester during the PM peak.
- Stations which are expected to experience meaningful trip increases and the affected routes include: Wellingborough (EMR: Intercity as it is assumed the Connect services provide sufficient capacity already), Spalding (Great Northern and Great Eastern Joint Railway: Joint Line, particularly between Doncaster-Peterborough) and Bulwell (EMR: Nottingham-Worksop).

Less urgent priorities as a result of the report and further details on the above are listed below for each of the scenarios. It should be noted that some of these recommendations may already now be in place.

Base year 2019

- EMR LINC-NNG: 3 car Class 170 to replace the Class 153 on the Newark Northgate to Lincoln 0742 service.
- EMR CLE-LEIC: 3 car Class 170s to replace the Class 156s on the 1539 and 1643 Leicester to Grimsby Town services.
- EMR PBO-DON: 3 car Class 170 to replace the Class 158 on the 0731 departure from Peterborough to Doncaster and a 2 car Class 170 to replace the Class 153 on the 12:47 departure from Doncaster to Peterborough.
- EMR LIV-NORW: 3 car Class 170s to replace the Class 158s on the 0651, 0955, 1056, 1156, 1257 and 1354 Norwich departures and on the 0742, 0951, 1151 and 1451 Liverpool departures.
- EMR NOT-WORK: 3 car Class 170 to replace Class 158 on the 0641 departure from Worksop to Nottingham.
- EMR SKG-NOT: 3 car Class 170 to replace the Class 156 on the 0711 Grantham to Nottingham service.
- EMR SHEF-STP: 5 car Class 810s to replace 5 car Class 222s on the 1332, 1432 and 1532 London departures, 10 car Class 810s to replace the 7 and 4+5 car Class 222s on the 1602, 1702 and 1902 London departures. To avoid any passengers standing, 10 car Class 810s to replace 7 car Class 222s on the 0700 and 0733 Sheffield departures and a 10 car Class 810 to replace the 5 car Class 222 on the 1600 Sheffield departure and a 5 car Class 810 on the 1701 Sheffield departure.

- EMR NOT-STP: 5 car Class 810s to replace 4 and 5 car Class 222s on the 0635 and 0806 London departures and 10 car Class 810s to replace the 5 and 4+5 Class 222s on the 1505 and 1605 London departures. 10 car and 5 car Class 810s to replace the 5 car Class 222s on the 1612 and 1712 Nottingham departures, respectively.
- Northern SHEFF-LINC: 3 car Class 195s to replace the Class 158s on the services which are over capacity (08:38 and 17:37 departures from Sheffield, 0723 and 1617 departures from Lincoln).
- Northern SHEF-NOTT: 3 car Class 195s to replace the Class 158s on the services which are over capacity (0803, 1607, 1707 and 1807 Sheffield departures and 0616, 0718, 1617 and 1717 Nottingham departures).
- CrossCountry BIRM-LEIC: 3 car Class 170s to replace 2 car Class 170s on the 1609 Birmingham departure however recent consultation with CrossCountry indicates the service is currently operating within demand and should the service require strengthening this carriage would have to be displaced from another service or additional rolling stock acquired. Further capacity required on the 1752 Birmingham departure.
- CrossCountry CAMB-BIRM: Further capacity required on the 1622 Birmingham departure however there are currently no available spare capacity to strengthen.
- CrossCountry NOT-CARD: more capacity required on the services departing Cardiff (1445, 1545 and 1645) however the 1645 is already 3 carriages and the 1545 is 4 carriages.
- CrossCountry NOT-BIRM: more capacity required on the pm peak services departing Birmingham (1512, 1619 and 1712). The 1512 would require additional rolling stock to strengthen to 3 car and the 1619 is already 4 car.
- CrossCountry DBY-BRI: more capacity required on the services departing Bristol (1335, 1435, 1535, 1635 and 1735) and departing Derby (0931, 1131, 1528 and 1631). It should be noted that the 1435 from Bristol is a HST and cannot be strengthened. CrossCountry are currently exploring options to strengthen the other services.
- CrossCountry EDB/NCL-BRI/PLY: more capacity required on the services departing Newcastle (0640 and 0740) and from Bristol (0603 (from Birmingham), 0634, 0735, 0932 and 1335).

Future year 2030 with committed rolling stock enhancements but no growth

- EMR NOTT-WORK: A low number of passengers are expected to be standing on the 1725 Nottingham departure and the 0739 Worksop departure, even with 3 car Class 170s in place, this should be monitored.

- EMR LIV-NORW: A low number of passengers are expected to be standing between Chesterfield and Sheffield on the 1451 and 1515 Liverpool departures and the 0955 and 1257 Norwich departures, even with 3 car Class 170s in place, this should be monitored.
- EMR CLE-LEIC: A low number of passengers are expected to be standing between Leicester and Nottingham on the 1643 departure from Leicester, even with 3 car Class 170s in place, this should be monitored.
- CrossCountry BIRM-LEIC: A reasonable number of passengers are expected to be standing on the 1752 Birmingham departure, this should be monitored.
- CrossCountry CAMB-BIRM: A low number of passengers are expected to be standing between Leicester and Peterborough on the 1622 Birmingham departure, this should be monitored.
- CrossCountry NOT-CARD: A significant number of passengers are expected to be standing between Derby and Nottingham on the 1445 and 1545 Cardiff departures, use of 3+2 car Class 170s would allow all passengers to sit however due to platform lengths this would preclude the ability for this service to call at Wilnecote and Willington as well as stations further west without infrastructure intervention.
- CrossCountry NOT-BIRM: A significant number of passengers are expected to be standing on the 1619 and 1712 Birmingham departure, use of 3+2 car Class 170s would allow all passengers to sit, however due to platform lengths this would mean the service pattern would need to be altered or infrastructure intervention required.
- CrossCountry DBY-BRI: A significant number of passengers are expected to be standing between Derby and Birmingham on a number of Bristol departures (1335, 1435, 1535, 1635 and 1735), use of 4x2 Class 220s on the 1335, 1435 and 1534 and use of Class 221s on the 1635 and 1735 departures would allow all passengers to sit however it should be noted that the 1435 from Bristol is a HST and cannot be strengthened. CrossCountry are currently exploring options to strengthen the other services. From Derby, a low number of passengers are expected to be standing between Derby and Birmingham on the 0931, 1131 and 1528 departures, these should be monitored. A significant number of passengers are expected to be standing on the 1631 Derby departure, use of Class 221s would allow all passengers to sit.
- CrossCountry EDB/NCL-BRI/PLY: Low number of passengers expected to be standing between Sheffield and Chesterfield on the 0640 and 0740 Newcastle departures and on the 0932 Bristol departure, these should be monitored. A reasonable number of passengers expected to be standing between Sheffield and Chesterfield on the 0603 Birmingham departure as well as the 0634, 0735 and 1335 Bristol departures, these should be monitored.

Future year 2030 with committed rolling stock enhancements and growth

- EMR CLE-LEIC: A low number of passengers are expected to be standing between Lincoln and Newark on the 1641 Grimsby Town to Leicester service, this should be monitored. A significant number of passengers are expected to be standing from Leicester to Nottingham and from Newark to Lincoln on the 1539 Leicester to Grimsby Town service, use of a 3+2 Car Class 170 would allow all passengers to sit. To avoid high numbers of standing passengers between Nottingham and Leicester, 2x2 car Class 170s required on the 0824 Nottingham departure and 3+2 car Class 170 required on the 1438 Grimsby Town departure. A low number of passengers are expected to be standing between Leicester and Nottingham on the 0842 Leicester departure however on the PM peak services further strengthening is expected to be required: 2x3 car Class 170s required on the 1643 and 1743 Leicester departures or an additional service provided to avoid high numbers of standing passengers should the growth be realised.
- EMR PBO-DON: A significant number of passengers expected to be standing between Peterborough and Lincoln on the 0731 departure from Peterborough, recommend either a 2x2 car Class 170 used or an additional service should the growth be realised. A low number of passengers are expected to be standing between Lincoln and Peterborough on the 0822 Lincoln departure, this should be monitored.
- EMR NOT-WORK – Strengthening beyond 3 car Class 170s expected to be required between Nottingham and Worksop as many services expected to be operating over seating capacity during the peak periods (0724, 0825, 1527, 1625 and 1725 departures from Nottingham and 0641, 0739, 0839, 0939 and 1739 departures from Worksop). Growth projections suggest additional services will be required, operating half hourly from Worksop during the AM peak (0700-1000) and from Nottingham during the PM peak (1500-1800).
- EMR LIV-NORW: A low number of passengers are expected to be standing between Nottingham and Chesterfield on the 1457 Norwich departure and the 0744 Sheffield departure despite 3 car Class 170s being assumed, this should be monitored. A low number of passengers are expected to be standing between Chesterfield and Sheffield on the 0955, 1257 and 1354 Norwich departures, these should be monitored. A low number of passengers are expected to be standing between Sheffield and Chesterfield and a reasonable number of passengers are expected to be standing between Chesterfield and Nottingham on the 1451 Liverpool departure despite a 3 car Class 170 being assumed, this should be monitored. A significant number of passengers are expected to be standing between Sheffield and Chesterfield on the 1551 Liverpool departure, it is recommended a 3+2 car Class 170 is used on this service, should the growth be realised, it is noted a higher capacity train may already be operating this service.

- EMR NEW-CRE: A reasonable number of passengers are expected to be standing between Derby and Nottingham on the 06:08 Crewe departure despite a 3 car Class 170 being assumed, this should be monitored.
- Northern SHEFF-LINC: A very low number of passengers expected to be standing between Gainsborough and Sheffield on the 1617 Lincoln departure despite a 3 car Class 195 being assumed, this should be monitored.
- Northern SHEF-NOTT: A low number of passengers are expected to be standing between Sheffield and Chesterfield on the 1707 and 1807 Sheffield departures as well as the 0718 Nottingham departure even with 3 car Class 195s being assumed, these should be monitored. A low number of passengers are expected to be standing between Nottingham and Chesterfield on the 1617 Nottingham departure, even with a 3 car Class 195 being assumed, this should be monitored. A significant number of passengers are expected to be standing between Nottingham and Chesterfield on the 0803, 1607, 1707 and 1807 Sheffield departures and on the 0718, 0817, 1717 and 1817 Nottingham departures, it is recommended that these services be monitored and additional services be provided at these times should the growth be realised (e.g. 1730 Nottingham departure and 1730 Sheffield departure).
- CrossCountry BIRM-LEIC: A low number of passengers are expected to be standing on the 1709 Birmingham departure and a reasonable number are expected to be standing on the 1752 departure, this should be monitored.
- CrossCountry CAMB-BIRM: A significant number of passengers are expected to be standing between Leicester and Peterborough on the 1622 Birmingham departure and the 1700 Cambridge departure, should this growth be realised, use of 3+2 car Class 170s would allow all passengers to sit however due to platform lengths the service pattern east of Leicester would be affected. A low number of passengers are expected to be standing between Leicester and Peterborough on the 1600 Cambridge departure, this should be monitored.
- CrossCountry NOT-CARD: A significant number of passengers are expected to be standing between Derby and Nottingham on the 1445 and 1545 Cardiff departures, use of 3+2 car Class 170s would allow the majority passengers to sit should the growth be realised.
- CrossCountry NOT-BIRM: A significant number of passengers are expected to be standing on the 1619 and 1712 Birmingham departure, use of 3+2 car Class 170s would allow almost all passengers to sit. A very low number of passengers are expected to be standing between Nottingham and Derby on the 2136 Nottingham departure, this should be monitored.
- CrossCountry DBY-BRI: A significant number of passengers are expected to be standing between Derby and Birmingham on a number of Bristol departures (1335, 1435, 1535, 1635 and 1735), use of 4x2 Class 220s on the 1335, 1435 and 1534 and use of Class 221s on the 1635 and 1735 departures would allow all passengers to sit, however it should be noted that the

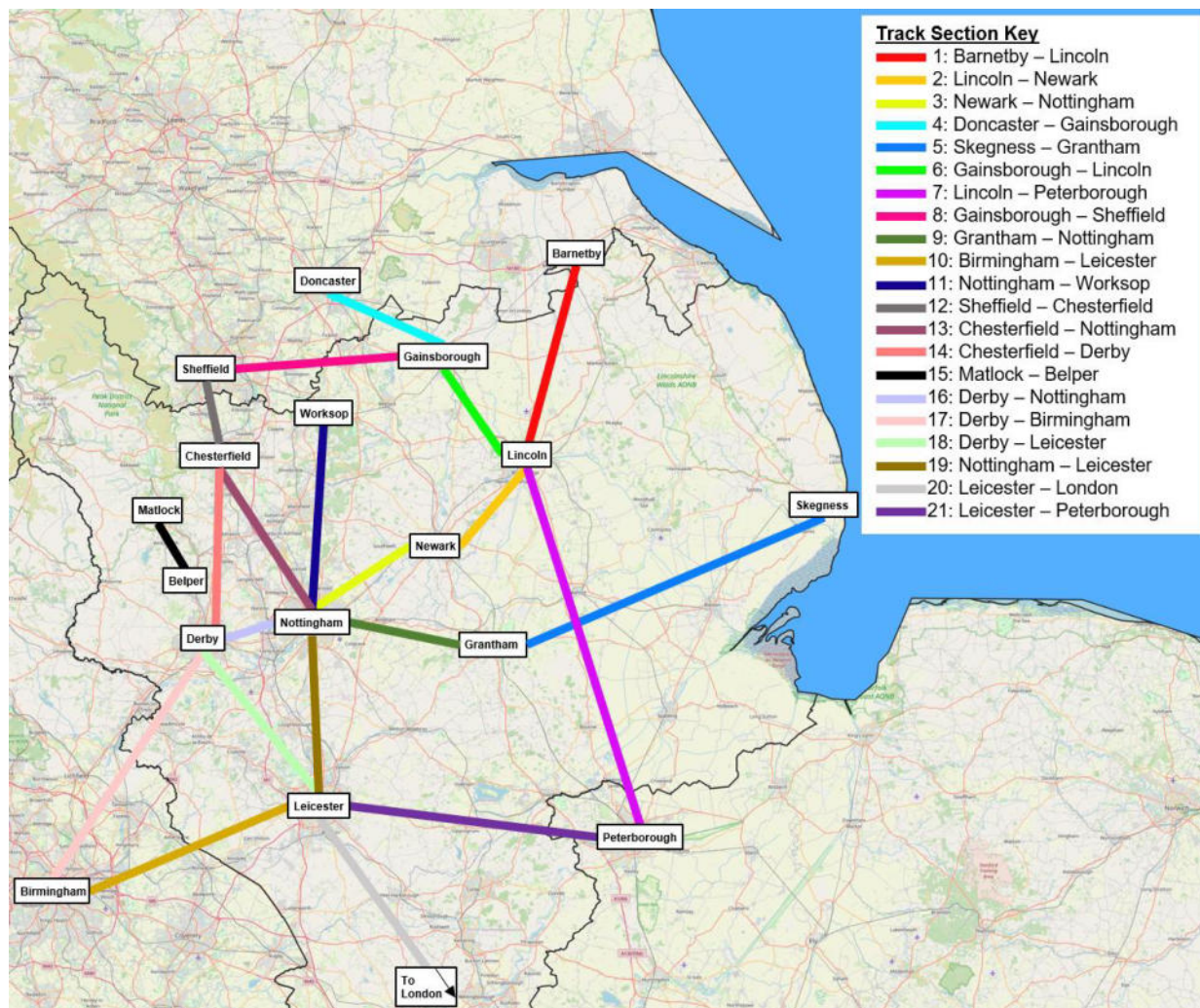
1435 from Bristol is a HST and cannot be strengthened. CrossCountry are currently exploring options to strengthen the other services. From Derby, a low number of passengers are expected to be standing between Derby and Birmingham on the 0931, 1131 and 1528 departures, these should be monitored. A significant number of passengers are expected to be standing on the 1631 Derby departure, use of Class 221s would allow all passengers to sit.

- CrossCountry EDB/NCL-BRI/PLY: Low number of passengers expected to be standing between Sheffield and Chesterfield on the 0640 and 0740 Newcastle departures and on the 0932 Bristol departure, these should be monitored. A reasonable number of passengers expected to be standing between Sheffield and Chesterfield on the 0634, 0735 and 1335 Bristol departures, these should be monitored. A significant number of passengers expected to be standing between Sheffield and Chesterfield on the 0603 Birmingham departure, this could be mitigated by the 0630 departure calling at Chesterfield.

1.0 INTRODUCTION

- 1.1 This note provides a summary of a study undertaken to forecast the future rail use in the East Midlands and highlight areas which are predicted to suffer from capacity issues in the near future (from 2030) so that mitigation can be planned for.
- 1.2 The study models three scenarios:
- Base year 2019;
 - Future year 2030 (with no growth); and
 - Future year 2030 (with growth).
- 1.3 A base year of 2019 was chosen since at the time of writing Covid-19 still appeared to be having a significant and unpredictable effect on the number of people travelling by rail. It is assumed that rail patronage will make a full recovery within the time period of the study (to 2030), however the recovery should be monitored closely as it is not yet clear what the impacts will be on the make up of trips (e.g. leisure vs commuter variances).
- 1.4 For the purpose of this study, the East Midlands rail network has been divided into 21 sections, allowing the capacity and demand for each section to be estimated. **Figure 1**, overleaf, illustrates the how the track has been divided, a summary of the capacity vs demand for each track section is provided within this note.
- 1.5 The following paragraphs describe the assumptions and methodology for the study.
- 1.6 Within this study, capacity is defined by the standard class seating capacity. For the base scenario, confidential patronage data was provided by East Midlands Railway (EMR), Northern and CrossCountry. The data has been appropriately censored within this note. The data is based on average weekday flows, taken from a 2 or 3 month period autumn 2019, this gives an overall feel for capacity vs demand, but does not seek to reflect a special event, holiday or pre-Christmas peaks, however for known events we would expect service enhancements to be planned by the operator.
- 1.7 The train timetables for all scenarios are based on those in place during March 2022, consequently there are some new services, for example the Corby Line (EMR Connect), where base data is not available and therefore future forecasting is not possible for these services at this time. Should the report be updated and more recent base data be available, these more recent service amendments should be included.

Figure 1: East Midlands rail network sections



Source: SCP

1.8 For the base scenario the capacity is based on the rolling stock at 2019 (as provided by the operators) whereas in the future 2030 scenarios any known committed improvements to stock is included, it should be noted that some of these improvements are in place at present. The rolling stock assumptions for each operator are shown in **Table 1**. No guarantee can be offered by SCP, East Midlands Councils or the TOCs that the rolling stock assumptions made within this report will be realised.

Table 1: Rolling stock assumptions for each operator

Operator	Rolling Stock				Current Stock (2022)
	2019 Base		2030 Future Scenarios		
	Class	Capacity	Class	Capacity	
East Midlands Railway (Regional)	Class 153	72	Class 170 (two car)	124	Liverpool – Norwich is currently served by 26 Class 158 two-car units, these can also operate other routes. Other regional routes are currently served by 15 Class 156 two-car units. The above are being phased out and replaced by Class 170 units over the coming years with some already in place.
	Class 156	139	Class 170 (three car)	189	
	Class 153 (two car)	144			
	Class 158	151			
	Class 153 + 156	211			
	Class 156 + 158	290			
	Class 158 + 158	302			
East Midlands Railway (Intercity)	Class 222 (five car)	193	Class 810 (five car)	254	Intercity routes are currently served by 27 Class 222 units and 4 Class 180 units. Class 810s are expected to enter into passenger service in early 2024.
	Class 222 (seven car)	238	Class 810 (ten car)	508	
	Class 222 (nine car)	341			
	Class 222 (ten car)	386			
Northern	Class 144	99	Class 15x (two car)	150	At present a mixture of Class 150s and Class 158s served the routes within the East Midlands.
	Class 142	106	Class 195 (two car)	121	
	Class 158	142	Class 195 (three car)	203	
	Class 142 + 153	181			
	Class 144 (two car)	198			
CrossCountry (170s)	Class 170 (two car)	120	Class 170 (two car)	120	The two/three car Class 170 units currently operate between Cardiff and Nottingham, Birmingham and Stansted Airport, and Birmingham and Leicester.
	Class 170 (three car)	200	Class 170 (three car)	200	
CrossCountry (Voyagers)	Class 220 (four car)	177	Class 220 (four car)	177	The Voyager trains currently operate the longer distance services which route through the East Midlands.
	Class 221 (five car)	239	Class 221 (five car)	239	
	Class 220 (four car) x2	354	Class 220 (four car) x2	354	
	Class 220+221	416	Class 220+221	416	
	HST	382	HST	382	

1.9 The growth scenario makes use of information from a variety of sources including adopted Local Plans and the most recently published (at the date of this note) Local Authority housing trajectories and employment land allocations to estimate the potential increase in rail trips for

each station, to allow the potential impact on the lines to be considered. Only locations within the East Midlands have been included when estimating growth, therefore the impact of growth within areas outside of the region is unaccounted for. Northampton is also excluded since the services which serve this station run predominantly outside of the East Midlands region. The distance of the future developments from the stations has been limited to 5km boundary (representing the core driving catchment) and where a proposal/prospect is within the catchment for more than one station, it has been allocated at the nearest station only (by drive time). The resulting growth estimated at each station is summarised in the attached East Midlands Growth Report 2019 -2030 in **Appendix 1**. No guarantee or warranty can be offered by SCP, East Midlands Councils or any Local Planning Authority on either the timing of the works or indeed the completion of any developments. These assumptions may need periodic review to maintain currency.

- 1.10 For each station, the potential rail trips associated with the proposals have been estimated by use of the Trip Rate Information Computer System (TRICS) and NOMIS census data. The TRICS 7.7.4 database was used to obtain person trip rates associated with residential and employment land use. To estimate the number of rail trips from the person trips, the rail modal split has been applied. Interrogation of NOMIS shows a rail modal split of 1.38% for the East Midlands area, although concentrating development closer to these nodes may increase rail use.
- 1.11 Where residential developments are not expected to be complete by the end of 2030, if the trajectory is not known, the number of dwellings expected per year have been estimated based on the size of the development. For employment land, where the land use is unknown, it has been assumed that those within a town centre will be B1 (office/light industry) use and those located out of town centre will be split equally between B2 (general industry) and B8 (warehouse/distribution) land use. It has also been assumed, for employment land, that 30% of the total site area is developed for buildings, and it is the area occupied by buildings that is used for trip generation calculations.
- 1.12 The distribution of potential passengers from each station has been modelled using travel to work data from NOMIS. Trip profiles have been derived using TRICS in order to map the potential passengers to the available services.
- 1.13 The alternative of using TEMPRO data and applying historic trends was considered and discounted. This is because these may not accurately reflect development plans and does not account for proximity to stations.

- 1.14 Additionally, the base assumptions also fail to account for Covid-19 which is likely to have a stalling effect on growth at least in the short term. Finally, some lines have seen a notable fall in patronage over the last decade, this is not expected to continue due to development plans and the step change improvement underway/planned for rolling stock generally and the service enhancements on some lines.
- 1.15 There are some services for which the base and forecast capacity is not shown, indicated in grey. The reasons for this missing data include:
- Data was not requested from the operator (in the case of London North Eastern Railway)
 - Data was not provided by the operator
 - Data for the base scenario was not possible due to the service being introduced after 2019
- 1.16 Finally, each of the concerned TOCs (EMR, Northern, CrossCountry and LNER) and Network Rail were offered the opportunity to review and provide feedback on the study in July 2022. Where comments were received these have been included within the report, including input to the executive summary.
- 1.17 The remainder of this note presents the results of the study for each section of track.

2.0 SECTION 1: BARNETBY – LINCOLN

2.1 This track section includes part of the Cleethorpes – Newark North Gate line, operated by East Midlands Railway (EMR).

Figure 2: Barnetby – Lincoln Capacity vs Demand



2.2 **Figure 2** shows that there were two peak morning services departing Barnetby which were over 80% capacity however with the introduction of the two car Class 170s there are expected to be no capacity issues for this section.

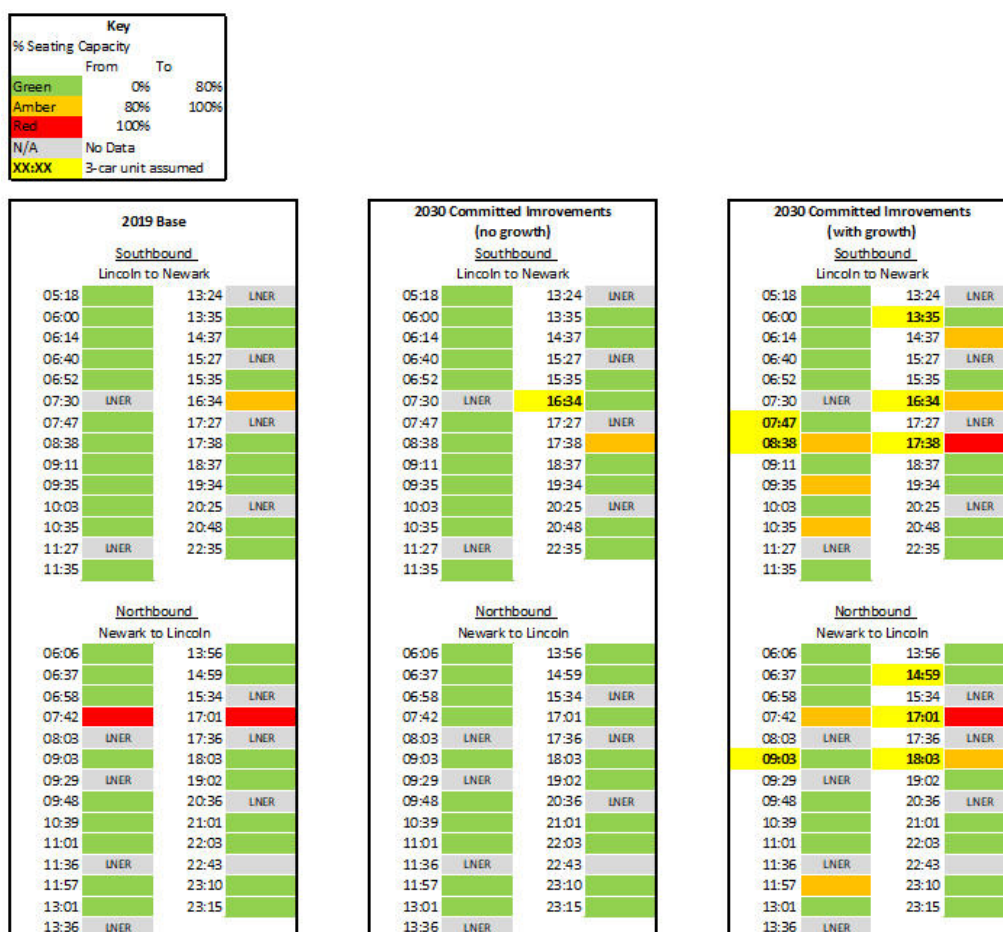
3.0 SECTION 2: LINCOLN – NEWARK

3.1 This section hosts the following services:

- Cleethorpes – Leicester, operated by EMR.
- Lincoln – Newark, operated by EMR.
- Lincoln – London, operated by London North Eastern Railway (LNER).

3.2 As noted earlier, data was not requested from LNER therefore these services have not been assessed and are shown in grey within **Figure 3**.

Figure 3: Lincoln - Newark Capacity vs Demand

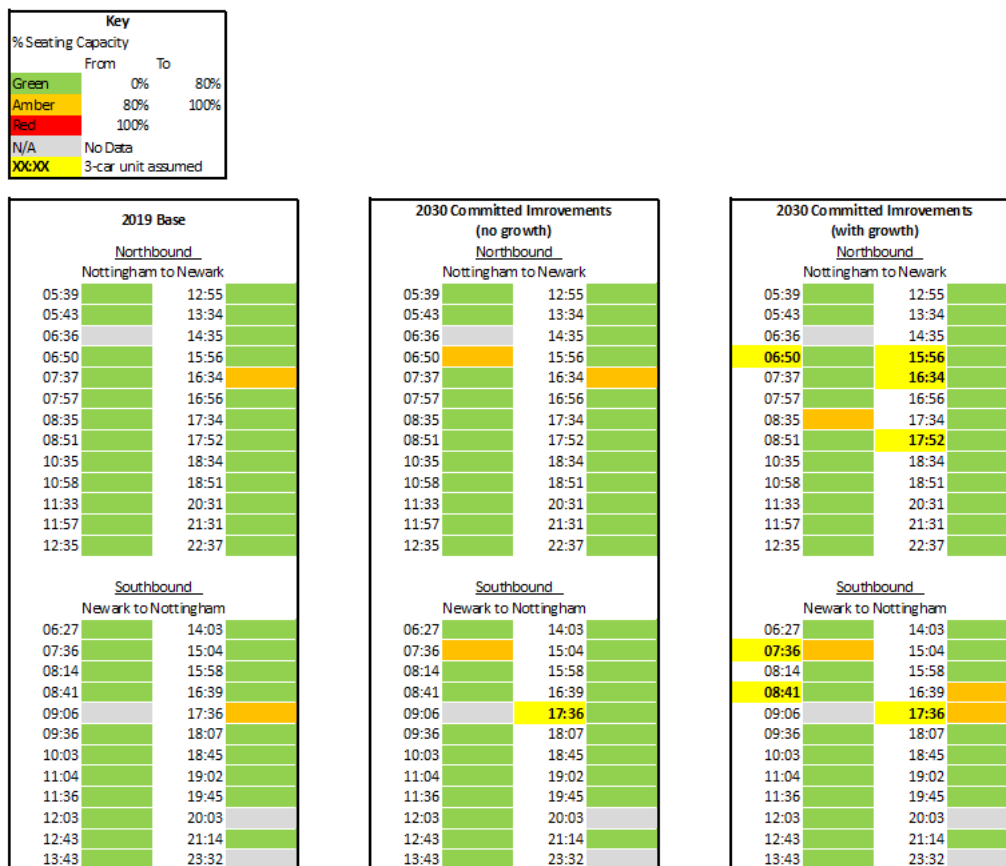


3.3 **Figure 3** shows that in the base scenario there were two peak services departing Newark which were over capacity, the 2030 (no growth) scenario demonstrates that with the introduction of the new rolling stock these issues are expected to be resolved. In the future scenarios, where the capacity was estimated to be over >100%, a three car Class 170 has been assumed instead of a two car Class 170, this is indicated by the highlighted departure times. Despite this increase in capacity there are still two services where demand is expected to surpass capacity: 17:38 from Lincoln and 17:01 from Newark Castle.

4.0 SECTION 3: NEWARK – NOTTINGHAM

4.1 This section includes part of the Cleethorpes – Leicester line and the Crewe – Newark Castle line, both operated by EMR.

Figure 4: Newark - Nottingham Capacity vs Demand



4.2 **Figure 4** shows that in the base scenario there were two pm peak services which were over 80% capacity, but with the introduction of the new rolling stock (three car) these issues would be resolved. In the future scenarios, where the capacity was estimated to be over >100%, a three car Class 170 has been assumed in place of a two car Class 170, this is indicated by the highlighted departure times in **Figure 4**, consequently all services would be expected to operate within capacity.

5.0 SECTION 4: DONCASTER – GAINSBOROUGH

5.1 This section hosts part of the Peterborough – Doncaster line, operated by EMR.

Figure 5: Doncaster - Gainsborough Capacity vs Demand



5.2 **Figure 5** shows that there are no existing or predicted capacity issues expected on this section.

6.0 SECTION 5: SKEGNESS – GRANTHAM

6.1 This section includes part of the Peterborough – Doncaster line, operated by EMR.

Figure 6: Skegness - Grantham Capacity vs Demand



6.2 **Figure 6** shows that there are no current capacity issues on this section. In the 2030 growth scenario the 07:06 departure from Skegness is expected to be over capacity therefore it has been assumed that a three car Class 170 would be used for this service, as indicated by the highlighted departure time.

7.0 SECTION 6: GAINSBOROUGH – LINCOLN

7.1 This section includes parts of the following services:

- Peterborough – Doncaster, operated by EMR.
- Sheffield – Lincoln, operated by Northern.

Figure 7: Gainsborough - Lincoln Capacity vs Demand



7.2 **Figure 7** shows that there are a number of existing capacity issues for Northern services in the base scenario. These issues can be alleviated by the introduction of three car Class 195s, indicated by the highlighted departure times in the future scenarios. Even with the use of three car Class 195s the 18:34 departure from Gainsborough and the 15:22 departure from Lincoln are still expected to operate over 80% capacity.

8.0 SECTION 7: LINCOLN – PETERBOROUGH

8.1 This section hosts part of the Peterborough – Doncaster line, operated by EMR.

Figure 8: Lincoln - Peterborough Capacity vs Demand



8.2 **Figure 8** shows that there are two existing services which experience capacity issues in the base scenario. The 13:35 departure from Lincoln is brought under 80% capacity with the introduction of the Class 170 and remains under 100% in the growth scenario without the need for an additional car. The 07:31 departure from Lincoln is brought under 100% capacity with the introduction of a three car Class 170 but is expected to go over capacity in the growth scenario despite the use of an additional car. It is assumed that where other services exceed capacity in the growth scenario a three car Class 170 would be used, where this is the case it is indicated by highlighted departure text. The growth scenario suggests that there may be capacity issues on the 08:22 departure from Lincoln even with the additional stock.

9.0 SECTION 8: GAINSBOROUGH – SHEFFIELD

9.1 This section includes the Gainsborough/Lincoln – Sheffield/Leeds line, operated by Northern.

Figure 9: Gainsborough - Sheffield Capacity vs Demand



9.2 **Figure 9** shows that for this section there are capacity issues in both directions during the AM and PM peaks in the base scenario. The introduction of three car Class 195s for a number of services (indicated by highlighted departure text) resolves capacity issues in the 2030 no growth scenario however the 16:37 departure from Gainsborough is predicted to run over 100% capacity in the growth scenario despite a three car train running.

10.0 SECTION 9: GRANTHAM – NOTTINGHAM

10.1 This section includes part of the Liverpool – Norwich and Skegness – Nottingham lines, both operated by EMR.

Figure 10: Grantham - Nottingham Capacity vs Demand

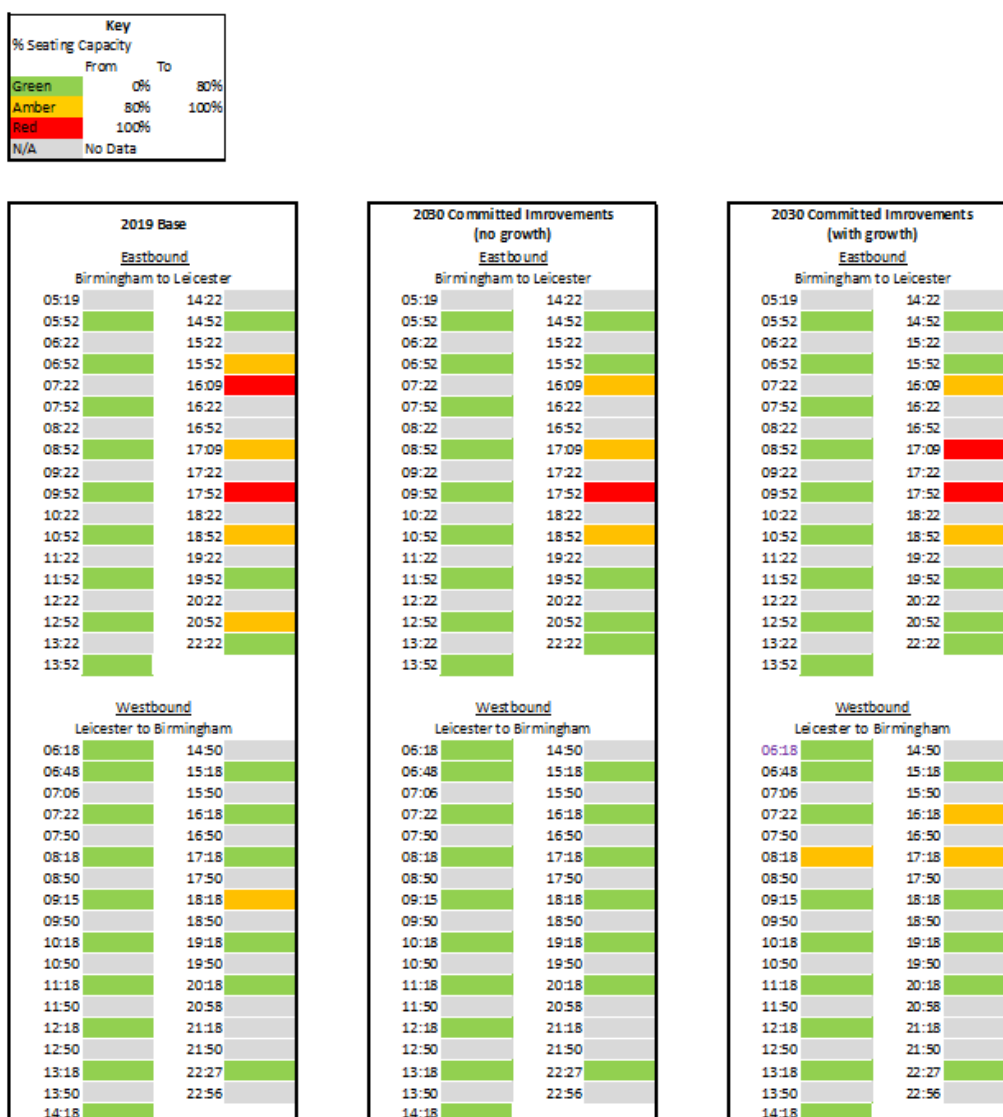


10.2 **Figure 10** shows that there are two Grantham to Nottingham services which are over capacity in the base scenario. The future scenarios show that with the new Class 170 stock the capacity is brought under 100%, noting that three car units have been assumed for several services to address any capacity issues, as indicated by highlighted departure time text.

11.0 SECTION 10: BIRMINGHAM – LEICESTER

11.1 This section includes the Leicester/Cambridge – Birmingham services, operated by CrossCountry. Limited data was received for the Cambridge – Birmingham route therefore there are a number of services where the base capacity is unknown.

Figure 11: Birmingham – Leicester Capacity vs Demand

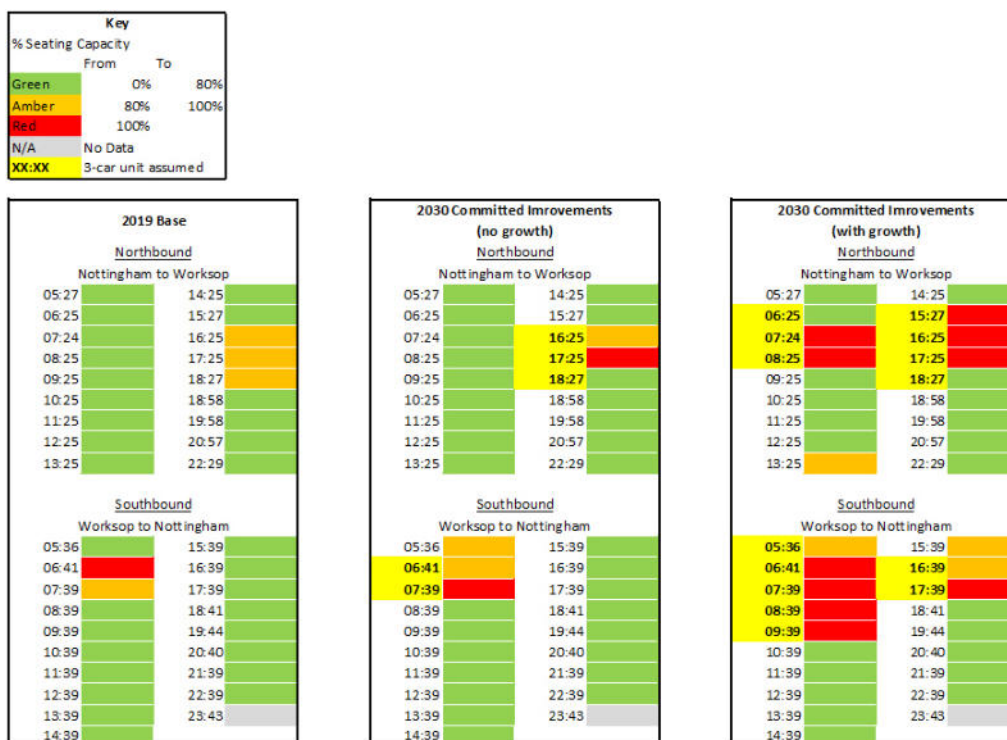


11.2 **Figure 11** shows that there are three services departing Birmingham in the PM peak which are over capacity in the base scenario. In future scenarios it is assumed that all services will use three car Class 170s, despite this it is still predicted that two PM peak services (17:09 and 17:52) will operate over capacity.

12.0 SECTION 11: NOTTINGHAM – WORKSOP

12.1 This section includes the Nottingham – Worksop line, operated by EMR.

Figure 12: Nottingham - Worksop Capacity vs Demand



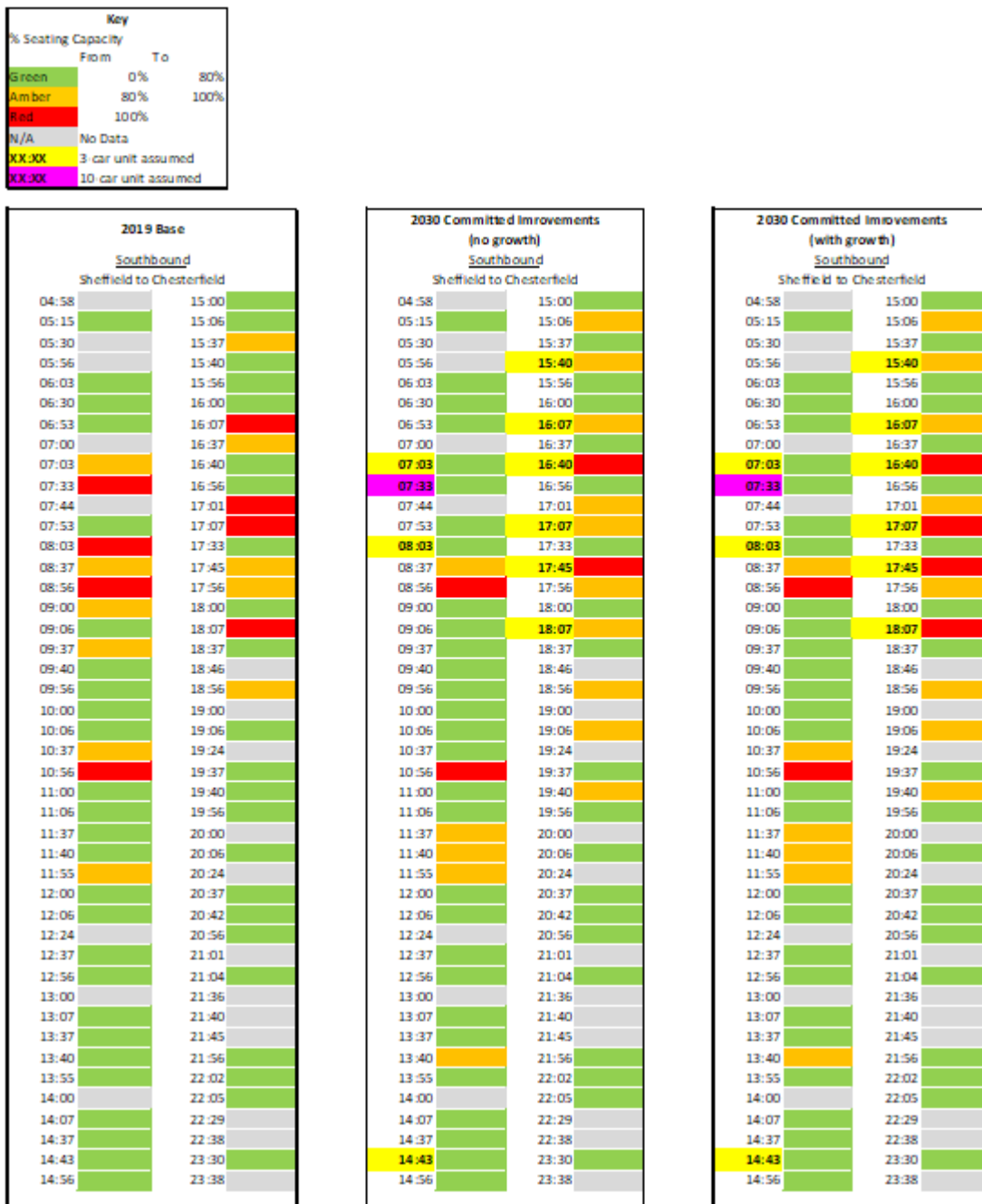
12.2 **Figure 12** shows that in the base scenario one AM peak service departing Nottingham is over capacity. Within the future no growth scenario this service is brought within capacity with the introduction of the Class 170 rolling stock however other services are expected to be over capacity. This is exacerbated within the growth scenario with many services within the AM and PM peak periods in both directions expected to be over capacity. Indeed, the PM peak services departing Nottingham and the AM services departing Worksop are predicted to be significantly over capacity (>200%) for the assumed stock.

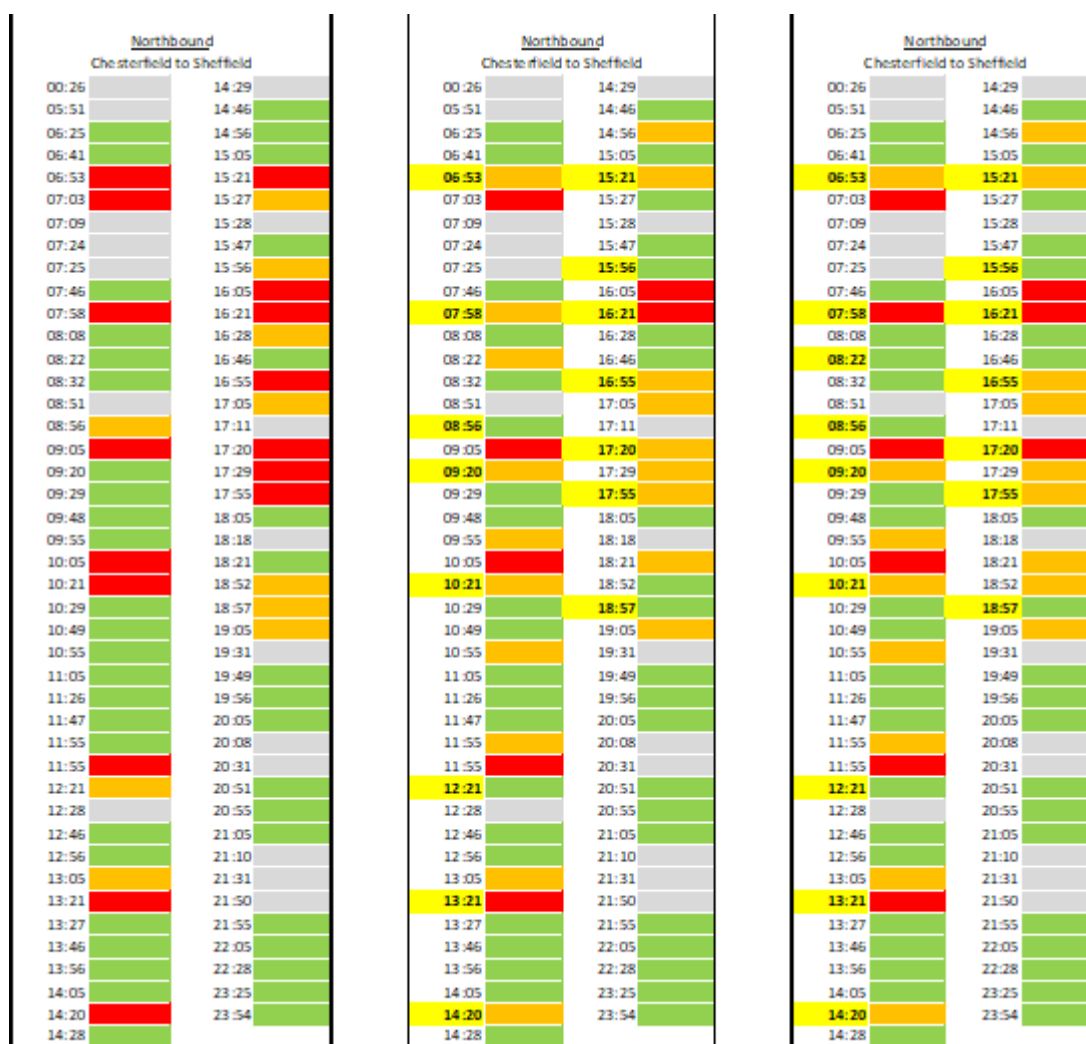
13.0 SECTION 12: SHEFFIELD – CHESTERFIELD

13.1 This section includes part of the following services:

- Sheffield/Leeds – Nottingham, operated by Northern.
- Sheffield – Birmingham, operated by CrossCountry.
- Sheffield – London, operated by EMR.
- Liverpool – Norwich, operated by EMR.

Figure 13: Sheffield - Chesterfield Capacity vs Demand





- 13.2 **Figure 13** shows that in the base scenario there are a number of services in both directions which are over capacity.
- 13.3 Northern services departing Sheffield which are over or nearing capacity in the AM peak (07:03 and 08:03) are relieved with the introduction of three car Class 195s. In the PM peak however, there are still two services (17:07 and 18:07) which are expected to remain over capacity despite use of three car units.
- 13.4 There are two AM CrossCountry services departing Sheffield (08:56 and 10:56) which are expected to remain over capacity in both future scenarios since no changes to rolling stock have been assumed for CrossCountry on this line.
- 13.5 All long distance EMR services departing Sheffield are expected to operate within capacity in the 2030 scenarios with the introduction of the Class 810s, note it has been assumed that a 10-car unit would be used for the 07:33 departure, as indicated by the highlighted departure time text (pink). On the Liverpool-Norwich service, whilst a number of the services are assumed to

be strengthened by use of three car 170s, as indicated by highlighted departure time text, there is still predicted to be capacity issues on two of the PM peak services (16:40 and 17:45) unless the stock used is further strengthened.

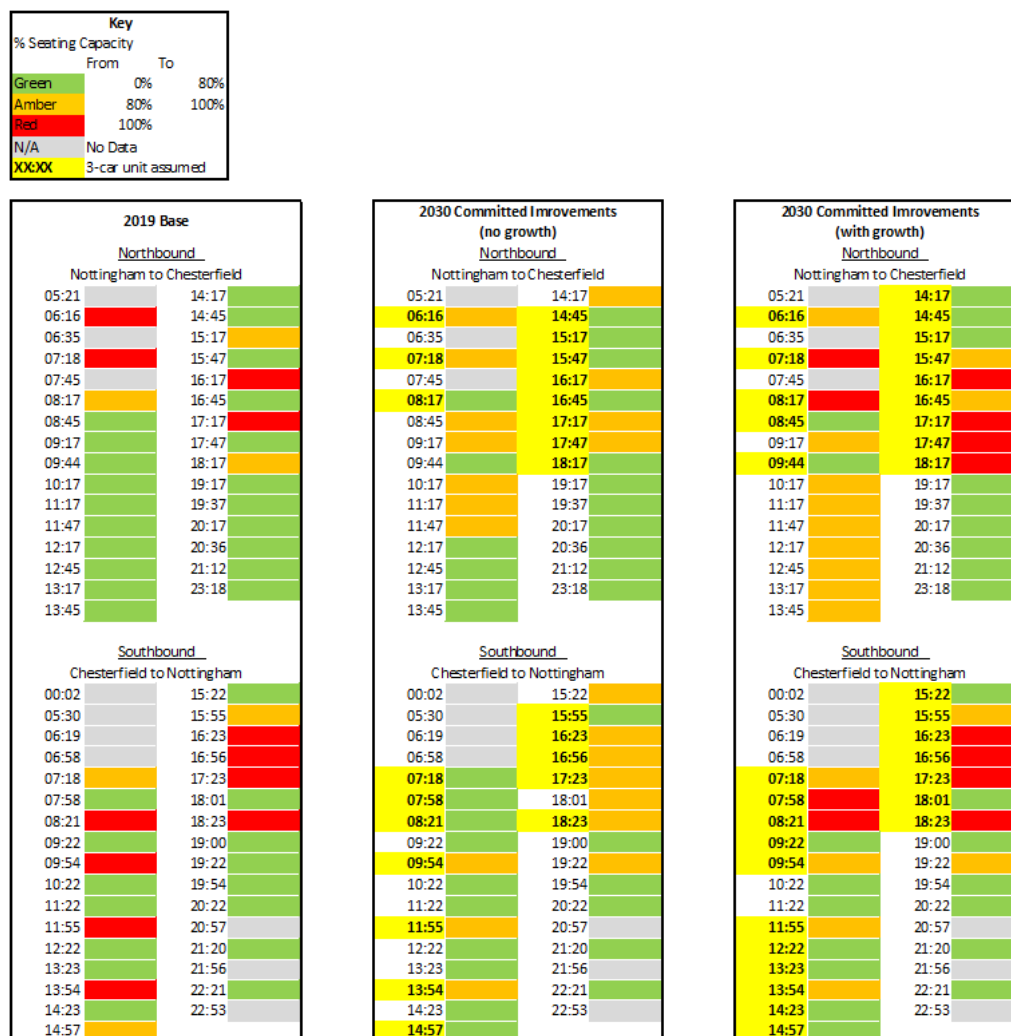
- 13.6 For northbound Northern services, the capacity issues shown in the base scenario are reduced to within 80-100% with the introduction of three car Class 195s in the future scenarios however with the growth included, the 07:58 Chesterfield departure is expected to surpass capacity.
- 13.7 There are five CrossCountry services departing Chesterfield (07:03, 09:05, 10:05, 11:55 and 16:05) which are expected to remain over capacity in both future scenarios since no changes to rolling stock have been assumed for CrossCountry on this line.
- 13.8 All long distance EMR services departing Chesterfield are expected to operate within capacity in the 2030 scenarios with the introduction of the five car Class 810s. On the Norwich-Liverpool service, whilst the majority of the services are assumed to be strengthened by use of three car 170s, as indicated by highlighted departure time text, there is still predicted to be capacity issues on three of the PM services (13:21, 16:21 and 17:20) unless the stock used is further strengthened.

14.0 SECTION 13: CHESTERFIELD – NOTTINGHAM

14.1 This section includes services from parts of the following lines:

- Liverpool – Norwich, operated by EMR.
- Sheffield/Leeds – Nottingham, operated by Northern.

Figure 14: Chesterfield - Nottingham Capacity vs Demand



14.2 **Figure 14** shows that in the base scenario there are multiple services in both directions which are over capacity.

14.3 For Northern services departing Nottingham, most of these capacity issues are resolved with the use of three car Class 195s but with added growth there are five peak services which are expected to require strengthening (07:18, 08:17, 16:17, 17:17 and 18:17). Similarly, departing Chesterfield in the growth scenario there is expected to be capacity issues (>100%) on the AM and PM peak services (08:21, 16:23, 17:23 and 18:23).

14.4 On the EMR Liverpool-Norwich service, whilst a number of the services departing Nottingham are assumed to be strengthened by use of three car 170s, as indicated by highlighted departure time text, there is still predicted to be capacity issues on the 17:47 departure. For services departing Chesterfield, whilst all services which were over capacity in the base scenario are relieved with the introduction of three car Class 170s in the 2020 no growth scenario, in the growth scenario, there are a number of services which are approaching 100% and two which are expected to be over capacity (07:58 and 16:56).

15.0 SECTION 14: CHESTERFIELD – DERBY

15.1 This section includes services from parts of the following lines:

- Sheffield – Birmingham, operated by CrossCountry,
- Sheffield – London, operated by EMR.

Figure 15: Chesterfield - Derby Capacity vs Demand

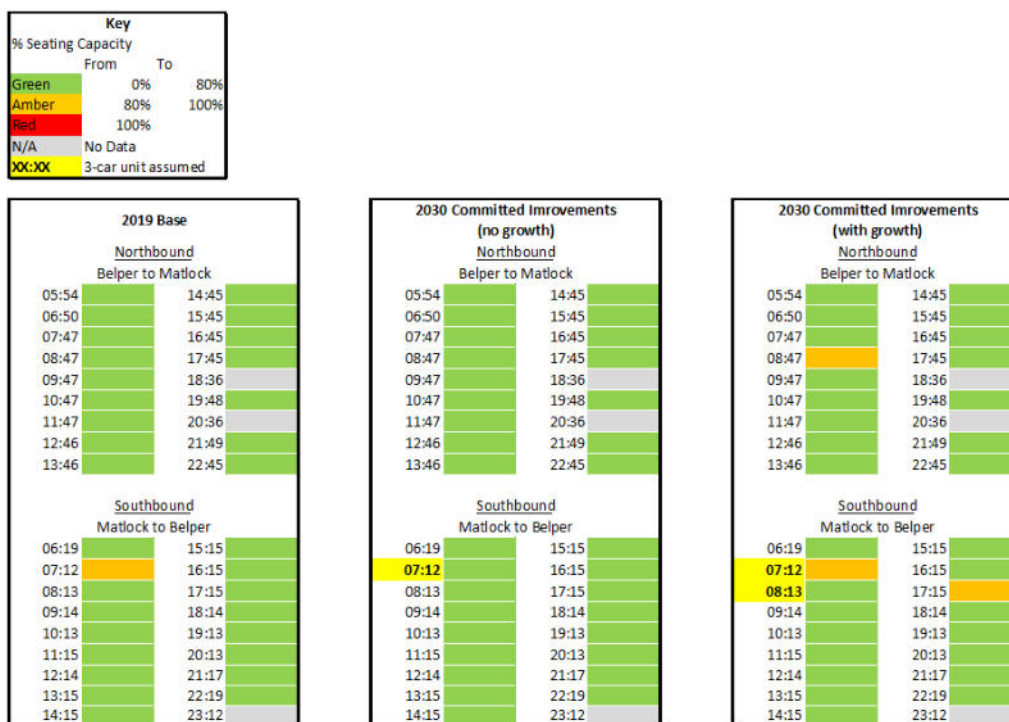


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- 15.2 **Figure 15** shows that in the base scenario there are 3-4 services in each direction which are over capacity.
- 15.3 Northbound, from Derby there is one CrossCountry service in the AM (08:45) and one in the PM (18:45) which are over capacity in the base scenario and therefore remain over capacity in the future scenarios as there is assumed to be no change in the rolling stock. Similarly, southbound from Chesterfield there are two morning CrossCountry services (08:49 and 10:49) which are expected to operate over capacity in all scenarios. CrossCountry are currently exploring options to strengthen these services.
- 15.4 All long distance EMR services which are over capacity in the base scenario are expected to operate within capacity (<100%) in the 2030 scenarios with the introduction of the Class 810s, note it has been assumed that a 10 car unit would be used for the 07:45 departure, as indicated by highlighted departure time text.

16.0 SECTION 15: MATLOCK – BELPER

16.1 This section includes services from part of the Nottingham – Matlock line, operated by EMR.

Figure 16: Matlock - Belper Capacity vs Demand



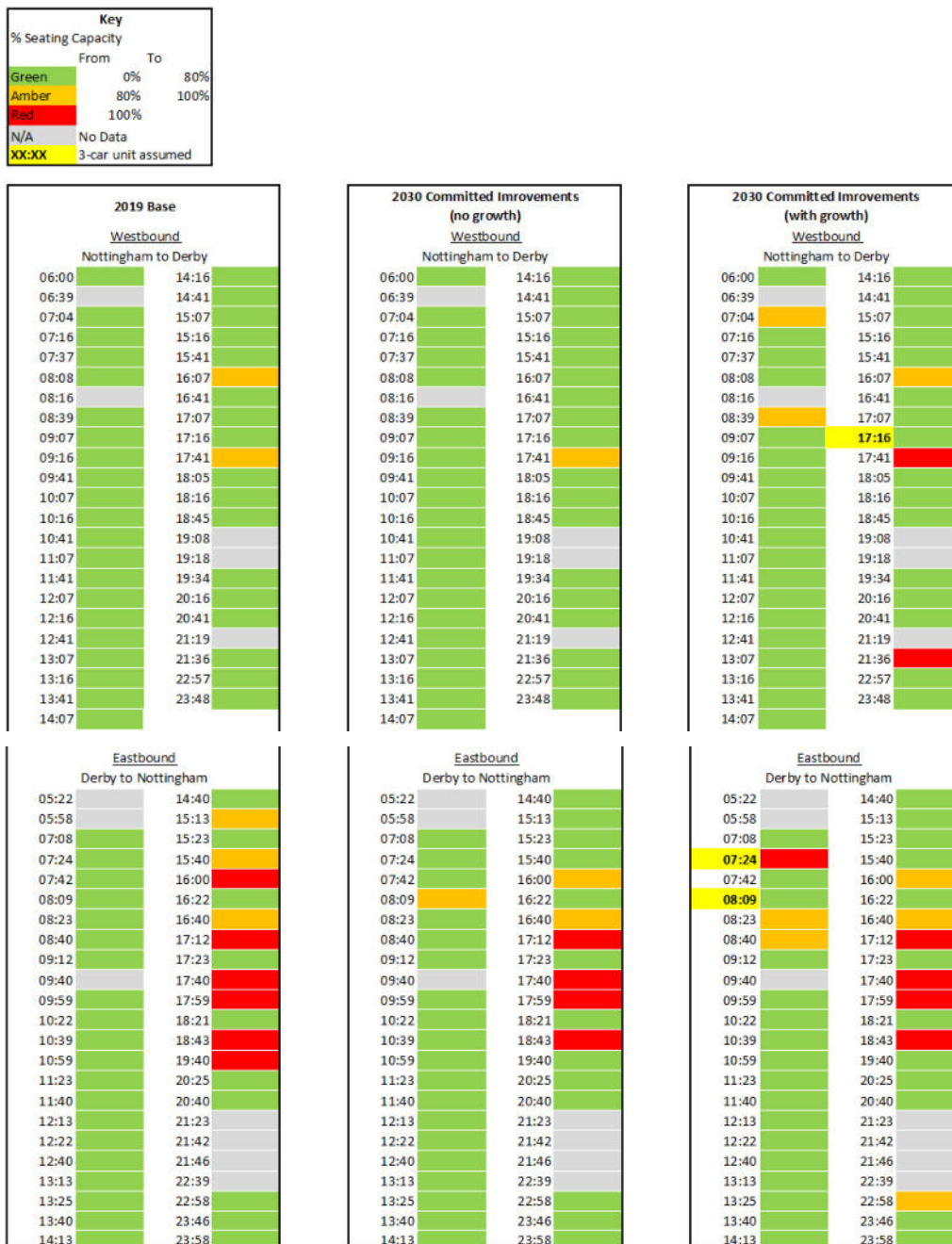
16.2 **Figure 16** shows that in the base scenario there are no capacity issues on any services in either direction. All services are well within capacity in the future scenarios including with growth with only the 08:47 departure from Belper exceeding 80% and the 07:12 and 08:12 departures from Matlock predicted to require three car units, as indicated by the highlighted departure time text.

17.0 SECTION 16: DERBY - NOTTINGHAM

17.1 This section includes services from:

- Nottingham – Matlock line, operated by EMR. Note this service is not currently terminating in Derby and not continuing to/from Nottingham.
- Newark – Crewe, operated by EMR.
- Nottingham – Birmingham, operated by CrossCountry.
- Nottingham – Cardiff, operated by CrossCountry.

Figure 17: Derby - Nottingham Capacity vs Demand



- 17.2 **Figure 17** shows that from Nottingham to Derby there are no capacity issues in the base or 2030 (no growth) scenario. In the 2030 growth scenario, there are two CrossCountry services expected to be over capacity; the 17:41 departure and the 21:36 departure, this is caused due to the expected growth in Spondon and Attenborough and the limited calls which services currently make in these locations. Passengers arriving/departing Attenborough are more likely to make connections at East Midlands Parkway rather than wait a substantial amount of time for a direct service meaning the high demand at 21:36 is very unlikely to be realised. Furthermore, it is assumed a three car Class 170 would be used on the 17:16 departure to manage the demand on the EMR service, as indicated by the highlighted departure time text.
- 17.3 For services departing Derby there are a number of capacity issues in the base scenario during the PM period for CrossCountry services. For the growth scenarios it has been assumed that where two car Class 170s were used these will be upped to three car for the CrossCountry services however this does not alleviate all of the capacity issues; within the 2030 scenarios there are still four CrossCountry services expected to be over capacity (17:12, 17:40, 17:59 and 18:43). Further to this within the growth scenario there is one AM peak EMR services (07:24) which is expected to run over capacity despite a three car unit being assumed. It is also assumed that a three car unit would be used on the 08:09 service to manage the demand at that time.

18.0 SECTION 17: DERBY - BIRMINGHAM

18.1 This section includes parts of CrossCountry services which operate Sheffield – Birmingham, Nottingham – Birmingham and Nottingham – Cardiff.

Figure 18: Derby - Birmingham Capacity vs Demand



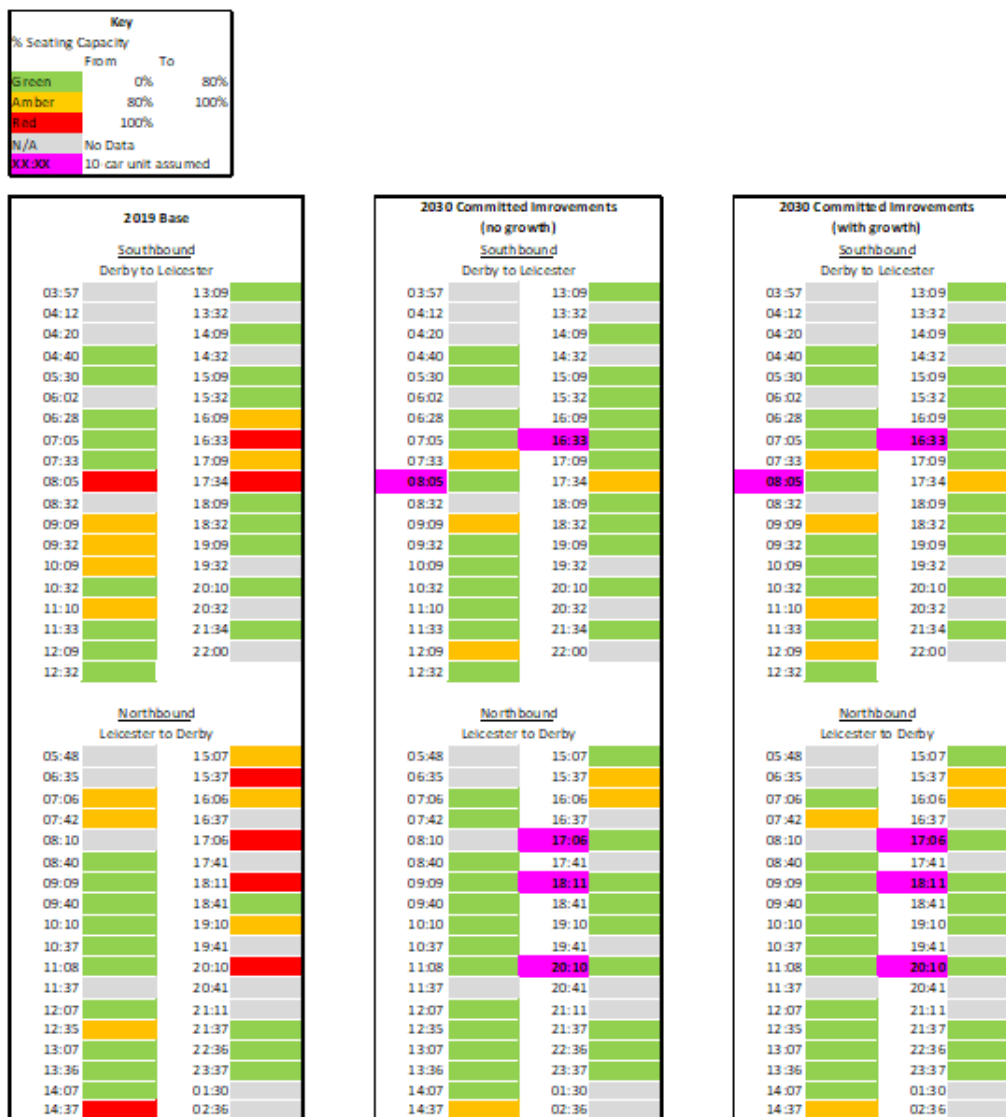
18.2 **Figure 18** shows that should the rolling stock remain unchanged there are four services which are expected to operate over capacity departing Derby (09:31, 11:31, 15:28 and 16:31). Departing Birmingham there are a number of services in and around the PM peak which are

expected to run over capacity should the rolling stock remain unchanged (15:03, 15:12, 16:03, 16:19, 17:03, 17:12, 18:03 and 19:03). The 15:12 departure from Birmingham was over capacity in the base scenario but is brought within capacity when a three car Class 170 is used in place of a two car.

19.0 SECTION 18: DERBY - LEICESTER

19.1 This section includes parts of the Sheffield – London line, operated by EMR.

Figure 19: Derby - Leicester Capacity vs Demand

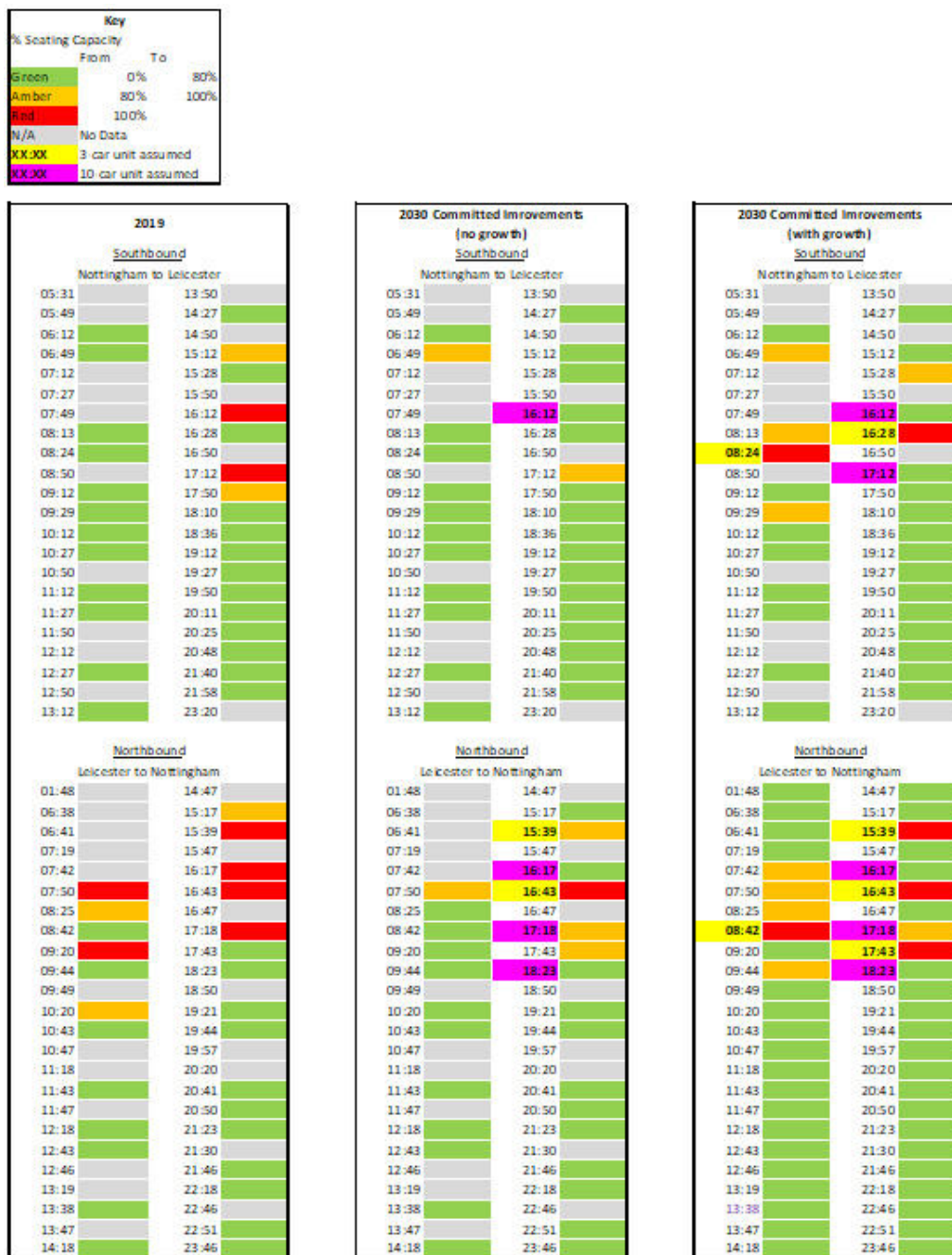


19.2 Figure 19 shows that there are a number of services in each direction which are shown to be running over capacity in the base scenario, With the introduction of new rolling stock (Class 810s) many of these issues are predicted to be overcome in both 2030 scenarios, It should be noted that a number of the high demand services are assumed to be operated by ten car Class 810s, where this is the case the departure time text is highlighted.

20.0 SECTION 19: NOTTINGHAM - LEICESTER

20.1 This section includes services on parts of the Cleethorpes - Leicester line and Nottingham – London line, both operated by EMR.

Figure 20: Nottingham - Leicester Capacity vs Demand



20.2 **Figure 20** shows that there are two services departing Nottingham in the base scenario which operate over capacity (16:12 and 17:12). These issues are overcome in the 2030 scenarios with the introduction of Class 810s, noting that ten car units are used on both of these services in the growth scenario. On the EMR regional service there is predicted to be capacity issues on

the 08:24 and 16:28 departures from Nottingham in the growth scenario unless the services are strengthened beyond the three car Class 170 unit.

- 20.3 Departing Leicester, **Figure 20** shows that there are six services operating over capacity in the base scenario, the majority of these issues are overcome in the 2030 no growth scenario with the introduction of the new rolling stock, with the exception of the 16:43 departure. Note it is assumed ten car Class 810s would be used on the 16:17, 17:18 and 18:23 services. In addition to the 16:43 service, there is predicted to be capacity issues on the 08:42, 15:39 and 17:43 departures from Leicester in the 2030 growth scenario despite the assumed use of three car Class 170s.

21.0 SECTION 20: LEICESTER - LONDON

21.1 This section includes services on parts of the Sheffield - London line and Nottingham – London line, both operated by EMR.

Figure 21: Leicester – London Capacity vs Demand





21.2 **Figure 21** shows that the capacity issues experienced in the base scenario are resolved with the introduction of the Class 810 rolling stock however it should be noted that it has been assumed that ten car units would be used on six of the services departing London and three of the services departing Leicester in the 2030 growth scenario, these are indicated by the highlighted departure time text.

22.0 SECTION 21: LEICESTER - PETERBOROUGH

22.1 This section includes services on the Leicester – Peterborough line, operated by CrossCountry.

Figure 22: Leicester – Peterborough Capacity vs Demand



22.2 **Figure 22** shows that there are capacity issues on one of the services departing Leicester in the base scenario. It is assumed that three car Class 170s would be used in place of two car units in the 2030 scenarios however not all capacity issues are resolved and with the added growth there is expected to be one PM peak service departing Leicester which is over capacity (17:13) and two PM peak services departing Peterborough which are over capacity (16:54 and 17:54).

23.0 CONCLUSION

- 23.1 In summary, this note presents the findings of a study undertaken to forecast the future passenger rail use in the East Midlands and highlight services which are predicted to encounter capacity issues in the future (from 2030) before others.
- 23.2 The priorities identified as a result of the study are provided in the executive summary at the outset of this report.
- 23.3 On the grounds of efficiency, the results should be used to prioritise monitoring of those areas/services which are predicted to operate over capacity sooner, and provide supplementary evidence to lobby for additional rolling stock to be in place for when it is required. The study can also assist in highlighting where new services could be introduced or calling patterns altered to better meet the demand.
- 23.4 It is recommended that the base scenario is kept under review and if necessary updated should covid be found to have a longer-term effect on rail patronage or once the effects of covid on travel behaviour has stabilised. New data could then be requested from train operating companies for the current services to give a more accurate base for the growth to be applied to.
- 23.5 It is also recommended that the growth projections are periodically monitored to update the progress of developments and add any additional developments which emerge.
- 23.6 Further work could be undertaken to establish whether the existing/proposed rolling stock is sufficient to accommodate the expected growth and assess whether there is any surplus to be assigned to the services which are predicted to operate over 100% seating capacity.

APPENDIX 1

Document Revision Control

Revision	Date	Status	Prepared By	Approved By
2	12.08.22	Final	LC	DY

INTRODUCTION

1. This report has been prepared by SCP on behalf of East Midlands Council (EMC), the purpose is to understand the locations with growth potential within the East Midlands region and in turn the opportunity for service growth.
2. The information contained in this note has been gathered from a variety of sources including adopted Local Plans and the most recently published (at the date of this note) Local Authority housing trajectories and employment land allocations. The information is summarised in terms of number of new dwellings and hectares (ha) of employment land between 2019 and 2030 for each of the stations within the region. The potential rail trips associated with the proposals at each station have been estimated by use of the Trip Rate Information Computer System (TRICS) and NOMIS census data. The TRICS 7.7.4 database was used to obtain person trip rates associated with residential and employment land use. To estimate the number of rail trips from the person trips, the rail modal split has been applied. Interrogation of NOMIS shows a rail model split of 1.38% for the East Midlands area, although concentrating development closer to these nodes may increase rail use.
3. The stations have been presented by line of route as follows:
 - Sheffield to Nottingham
 - Lincoln to Cleethorpes
 - Doncaster to Peterborough via Lincoln and Sleaford
 - Ivanhoe Line (Loughborough to Leicester inc. East Midlands Parkway and Market Harborough)
 - Castle Line (Nottingham to Lincoln)
 - Poacher Line (Nottingham to Skegness via Grantham)
 - Derwent Valley Line (Matlock to Nottingham inc. Willington)
 - Robin Hood Line (Worksop to Nottingham via Mansfield)
 - Melton Mowbray to Luton Airport Parkway (including Stamford)
4. This note collates both current information as well as any known future developments which could lead to growth within the vicinity of each station, this includes planned investments at and in the vicinity of stations, housing proposals and employment prospects. Where possible, the distance

from the station has been limited to within roughly a 5km boundary (representing the core driving catchment).

5. No guarantee or warranty can be offered by either EMC or SCP on either the timing of the works or indeed the completion of any developments.
6. A worked example of the methodology described above and used within this report is provided below, with Wellington Station used as an illustration.

Worked Example – Wellingborough Station

Residential Growth

East Northamptonshire Local Plan and Wellingborough’s latest Housing Land Supply Report shows that there is expected to be 6,018 dwellings over 26 sites delivered by 2030.

For residential sites the TRICS daily person trip rate is 7.688 per dwelling.

$$\text{Additional residential rail trips} = \text{No. dwellings} \times \text{person trip rate} \times \text{rail modal split}$$

$$638 = 6,018 \times 7.688 \times 0.0138$$

It is therefore assumed that there will be 319 additional arrivals and 319 additional departures in relation to new housing within 5km of Wellingborough station.

Employment Growth

Wellingborough’s latest employment land supply reports indicates that there will be 12 ha B1, 9 ha B2 and 15.5 ha B8 expected by 2030, spread over numerous sites. Note: the site size has already been factored to assume 30% of site area will be used for trip estimating purposes.

For employment sites the TRICS daily person trip rate is 18.789 per 100sqm for B1 use and 12.148 per 100sqm for B2/B8 use.

$$\begin{aligned} \text{Additional employment rail trips} &= ((B1 \text{ area (ha)} \times B1 \text{ person trip rate}) + (B2 \text{ area (ha)} \times B2 \text{ person trip rate}) \\ &+ (B8 \text{ area (ha)} \times B8 \text{ person trip rate})) \times 100 \times \text{rail modal split} \end{aligned}$$

$$720 = ((11.85 \times 18.789) + (9.18 \times 12.148) + (15.5 \times 12.148)) \times 100 \times 0.0138$$

It is therefore assumed that there will be 360 additional arrivals and 360 additional departures in relation to new employment sites within 5km of Wellingborough station.

Overall, this results in an additional 1,358 daily weekday rail trips at Wellingborough station.

Existing daily trips

The existing average daily weekday rail trips has been calculated using the reported 2019/20 annual patronage split between an estimated 338 working days (52 weeks at 6.5 days per week). Therefore, for Wellingborough this results in:

$$\frac{917,400}{338} = 2,714 \text{ average daily weekday trips}$$

THE LINES

Sheffield to Nottingham

7. This text focuses on the regional and local services which stop at Dronfield, Chesterfield, Alfreton, Langley Mill, Ilkeston and Nottingham. Sheffield is excluded from the report as it falls outside of the EMC region.

Table 1: Sheffield to Nottingham Station Growth

<u>Station</u>	<u>General and at/near Station Investments</u>	<u>Housing Growth Potential</u>	<u>Economic Growth Potential</u>
Sheffield	For information regarding Sheffield and stations through Manchester Piccadilly to Liverpool Lime Street consult the appropriate Local Authorities.		
Dronfield	Structural refurbishment/replacement of access ramp adjacent to Dronfield station, funded by Derbyshire County council, status unknown.	<ul style="list-style-type: none"> 80 proposed dwellings expected to be delivered by 2030. <p>Resultant daily rail trips: 4 arrivals and 4 departures</p>	
Chesterfield	Waterside development which includes redevelopment of the area near the station.	<ul style="list-style-type: none"> The Waterside development includes plans for up to 1,550 new dwellings. Development of Chesterfield Town Centre and A61 growth corridor includes plans for 1,990 dwellings. Plans for 1,000 dwellings North of Wingerworth. 3,343 proposed dwellings over 36 sites (including the above) expected to be delivered by 2030. 	<ul style="list-style-type: none"> Large strategic developments including Waterside (http://www.chesterfieldwaterside.com/) and development of Chesterfield Town Centre and A61 growth corridor. 3.3ha B1, 3.3ha B2 and 3.3ha B8 expected over 3 sites by 2030. <p>Resultant daily rail trips: 98 arrivals and 98 departures</p>

		Resultant daily rail trips: 178 arrivals and 178 departures	
Alfreton	A new footbridge with lifts and stairs, Access for All (AFA) funded. New station building, design part funded but scheme currently delayed – expected to be completed by 2024.	<ul style="list-style-type: none"> 1,539 proposed dwellings over 18 sites expected to be delivered by 2030. Resultant daily rail trips: 82 arrivals and 82 departures	<ul style="list-style-type: none"> The station is located next to a significant industrial estate. 5.7ha B1, 2.5ha B2 and 3.2ha B8 expected over 7 sites by 2030. Resultant daily rail trips: 122 arrivals and 122 departures
Langley Mill		<ul style="list-style-type: none"> Over 1,400 dwellings planned in the Langley Mill and Heanor area over next 10 years. 1,338 proposed dwellings over 17 sites expected to be delivered by 2030. Resultant daily rail trips: 71 arrivals and 71 departures	<ul style="list-style-type: none"> 1.4ha B1, 7.3ha B2 and 7.3ha B8 expected by 2030. Resultant daily rail trips: 140 arrivals and 140 departures
Ilkeston	New Station opened in April 2017, this includes new cycle links and access into the town.	<u>Within 5km</u> <ul style="list-style-type: none"> Over 3500 proposed dwellings planned to be delivered over 35 sites by 2030. Resultant daily rail trips: 191 arrivals and 191 departures	<ul style="list-style-type: none"> 4ha B2 and 4ha B8 expected by 2030 over 10 strategic sites. Resultant daily rail trips: 67 arrivals and 67 departures
Nottingham	The redevelopment of Broadmarsh shopping centre includes improved access to the station in the form of high quality pedestrian routes as well as improvements to cycle and bus routes in the city centre.	<u>Within 1km:</u> <ul style="list-style-type: none"> Broadmarsh and Southern Gateway improvements includes plans for 900 dwellings. The Creative Quarter includes plans for 3,350 dwellings. 	<ul style="list-style-type: none"> Broadmarsh and Southern Gateway will provide 9,990 jobs. The Creative Quarter will provide 7,103 jobs. MediPark development will provide 1,000 jobs. Nottingham’s Enterprise Zone will provide 8,000

	<p>Relocation of many bus stops to bring the bus services closer to the station. There are also major investments in cycle infrastructure which will link up via Canal Street. Improvements to station signage in 2022.</p>	<ul style="list-style-type: none"> 7,479 proposed dwellings over 43 sites (including the above) expected to be delivered by 2030. <p>Resultant daily rail trips: 397 arrivals and 397 departures</p>	<p>jobs, this includes MediPark (above), Beeston Business Park, Nottingham Science Park and the Boots alliance site (note these are also within 5km of Beeston station, see section 18).</p> <ul style="list-style-type: none"> 7.1ha B1 land use expected by 2030 over 22 sites. <p>Resultant daily rail trips: 94 arrivals and 94 departures</p>
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8. Along this line we can see that there is expected to be significant growth at most stations including the already well-established stations of Chesterfield and Nottingham. Nottingham’s main employers within 1 km of the station already account for 14,000 people with major employers including Nottingham County Council, Trent University, Eon and HMRC. Improved access to Nottingham station via pedestrian and cycle routes will help to attract even more customers, while the Broadmarsh shopping centre development plans and plans for the Creative Quarter will promote further growth within very close proximity to the station.

Lincoln to Cleethorpes

9. This section includes the local stations between Lincoln and Cleethorpes.

Table 2: Lincoln to Cleethorpes Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Lincoln	<p>Completion of Lincoln transport hub in 2018, includes a new bus station nearer to the station, a new multi-storey car park and other enhancements.</p>	<p>Significant sustainable urban extension developments include:</p> <ul style="list-style-type: none"> • Canwick Heath development includes plans for 3,500 dwellings by 2036 with potential for a net total of 6,000 dwellings beyond this. • In the North East Quadrant, the Greetwell Quarry site has plans for 1,400 dwellings (500 of which received permission in 2015). • Western Growth corridor (Swanpool, Fen Farm and Decoy Farm) has plans for 3,200 dwellings. • 3,215 proposed dwellings over 28 sites, including the above, expected to be delivered by 2030. <p>Resultant daily rail trips: 171 arrivals and 171 departures</p>	<ul style="list-style-type: none"> • 7ha of flexible new employment land at the Canwick Heath development to provide job opportunities. • Up to 5ha of employment land within the Greetwell area. • 20ha of mixed employment opportunities through the Western Growth Corridor. • 4.9ha B1, 4.9ha B2 and 4.9ha B8 expected by 2030 over 5 strategic sites. <p>Resultant daily rail trips: 144 arrivals and 144 departures</p>
Market Rasen		<ul style="list-style-type: none"> • 437 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 23 arrivals and 23 departures</p>	

Barnetby			
Habrough			
Grimsby Town		<ul style="list-style-type: none"> 124 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 7 arrivals and 7 departures</p>	
Cleethorpes	Accessible footbridge opened in 2022 providing step free access over the railway.		

10. There are many proposed housing developments in and around Lincolnshire, with further growth expected within the City of Lincoln itself. The most significant housing and employment growth will be at Canwick Heath, located 3 km south east of Lincoln station, further details can be found in the Draft Central Lincolnshire Local Plan. There are a number of developments planned within the district of East Lindsey which are over 5km away from the rail line, these may generate commuter trips.

Doncaster to Peterborough via Lincoln and Sleaford

11. The following text covers all stations between Doncaster and Peterborough (with the exception of Doncaster and Peterborough as they lie outside the EM region). To avoid repetition, for Lincoln see Table 2.

Table 3: Doncaster to Peterborough Station Growth

Station	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
<p>Gainsborough Lea Road</p>	<p>Ambitions to install a lift as an alternative to ramps.</p>	<p>Significant Sustainable Urban Extension developments include:</p> <ul style="list-style-type: none"> Gainsborough Southern Neighbourhood SUE includes proposals for 2500 dwellings, 1400 of these by 2036. Gainsborough Northern Neighbourhood includes proposals for 2500 dwellings, 750 of these by 2036. 806 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 43 arrivals and 43 departures</p> <p>Note: An additional 973 proposed dwellings are within closer proximity to Gainsborough Central although due to current services potential rail passengers are more likely to use Gainsborough Lea Road.</p>	<ul style="list-style-type: none"> Gainsborough Southern Neighbourhood SUE includes 1.5ha of employment land to accommodate businesses and general industry. 0.4ha B1, 0.4ha B2 and 0.4ha B8 expected by 2030. <p>Resultant daily rail trips: 12 arrivals and 12 departures</p> <p>Note: Two further sites expected within closer proximity to Gainsborough Central. Gainsborough Northern Neighbourhood and Somerby Park providing 2ha B1, 2ha B2 and 2ha B8 by 2030.</p>
<p>Saxilby</p>		<ul style="list-style-type: none"> 474 proposed dwellings over 5 sites expected to be delivered by 2030. 	

		Resultant daily rail trips: 25 arrivals and 25 departures	
Lincoln	See Table 2.		
Metheringham		<ul style="list-style-type: none"> 343 proposed dwellings over 2 sites expected to be delivered by 2030. Resultant daily rail trips: 18 arrivals and 18 departures	
Ruskington		<ul style="list-style-type: none"> 453 proposed dwellings over 6 sites expected to be delivered by 2030. Resultant daily rail trips: 24 arrivals and 24 departures	
Sleaford		<ul style="list-style-type: none"> 1,292 proposed dwellings over 12 sites expected to be delivered by 2030. Resultant daily rail trips: 69 arrivals and 69 departures	<ul style="list-style-type: none"> Sleaford Enterprise Park Extension allocated for a range of businesses and a further 3 ha dedicated in Sleaford within the Sustainable Urban Extension. 1.8ha B1, 1.8ha B2 and 1.8ha B8 expected by 2030. Resultant daily rail trips: 53 arrivals and 53 departures
Spalding	Station underwent improvements in 2020 including new lifts and platform surfacing.	<ul style="list-style-type: none"> Development of the 'Land North of Vernatt's Drain' includes plans for 3,750 dwellings. <p>By 2030, a net total of 3,621 new dwellings over 27 sites are proposed for Spalding.</p> Resultant daily rail trips: 192 arrivals and 192 departures	<u>Within 5km:</u> <ul style="list-style-type: none"> There is 82 Ha of land to be provided across the Lincolnshire plan area with extensions at the already existing employment sites at Wardentree Lane and Clay Lake Industrial Estate. 7.2ha B1, 7.2ha B2 and 7.2ha B8 expected by 2030 over 4 strategic sites including the above.

			<p>Resultant daily rail trips: 214 arrivals and 214 departures</p>
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12. The largest areas of growth along this line over the forthcoming years will be in Gainsborough and Spalding, however the large development proposed within 1 km of Sleaford station could see a significant increase in station usage here. Along the rest of the line there are various expansions in the smaller villages, with notable growth in Saxilby, Metherringham and Ruskington.

Ivanhoe Line (including Market Harborough)

13. This section includes stations between East Midlands Parkway and Leicester, as well as Market Harborough.

Table 4: Ivanhoe Line Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
East Midlands Parkway	There remain aspirations to improve connections with East Midlands Airport (East Midlands Airport Sustainable Development Plan 2015).	<ul style="list-style-type: none"> 201 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 11 arrivals and 11 departures</p>	<ul style="list-style-type: none"> East Midlands Enterprise Gateway/East Midlands Gateway Rail Freight Interchange with provide up to 7,000 jobs. 3.7ha B1 and 3.7ha B8 expected by 2030. <p>Resultant daily rail trips: 80 arrivals and 80 departures</p>
Loughborough		<ul style="list-style-type: none"> Within the West of Loughborough SUE there are plans for 3,000 new dwellings. 1,805 proposed dwellings over 10 sites, including the above, expected to be delivered by 2030. <p>Resultant daily rail trips: 96 arrivals and 96 departures</p>	<p><u>Within 5km:</u></p> <ul style="list-style-type: none"> Loughborough University Science and Enterprise Park will provide 4,000 jobs by 2020. Loughborough and Leicester Science and Innovation Enterprise Zone (EZ) is set to create over 21,000 new jobs and £123million over the next 25 years. The EZ covers 2 sites in Loughborough and one in Leicester. 1.4ha B1, 1.4ha B2 and 1.4ha B8 expected by 2030. <p>Resultant daily rail trips: 42 arrivals and 42 departures</p>

<p>Barrow Upon Soar</p>		<ul style="list-style-type: none"> • 423 proposed dwellings over 4 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 23 arrivals and 23 departures</p>	<ul style="list-style-type: none"> • 0.1ha B1, 0.3ha B2 and 0.3ha B8 expected by 2030. <p>Resultant daily rail trips: 6 arrivals and 6 departures</p>
<p>Sileby</p>		<ul style="list-style-type: none"> • 2,036 proposed dwellings over 9 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 108 arrivals and 108 departures</p>	<ul style="list-style-type: none"> • 0.8ha B2 and 0.8ha B8 expected by 2030. <p>Resultant daily rail trips: 14 arrivals and 14 departures</p>
<p>Leicester</p>	<p>Plans for a new station entrance to improve accessibility to the city centre, expected to be complete in 2024, subject to planning permission.</p>	<ul style="list-style-type: none"> • 24,000 proposed dwellings within Leicester’s Urban Area. • 9,752 proposed dwellings over 123 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 517 arrivals and 517 departures</p>	<ul style="list-style-type: none"> • Leicester’s Urban Area developments will provide 7,770 new jobs, 3,250 expected to be within 5km of the station and part of the Loughborough and Leicester Enterprise zone. • 1.5ha B1 and 1.9ha B8 expected by 2030. <p>Resultant daily rail trips: 36 arrivals and 36 departures</p>
<p>Market Harborough</p>	<p>Underwent recent work including a new accessible footbridge, new cycle hub providing 100 cycle parking spaces and an extended car park with 200 extra car parking spaces. Further plans for improved facilities including new accessible toilet block and waiting rooms.</p>	<ul style="list-style-type: none"> • Confirmed 1,500 dwelling development to the north-west of Market Harborough as part of the North West Market Harborough Strategic Development Area. • 2,340 proposed dwellings over 24 sites, including the above area, expected to be delivered by 2030. 	<ul style="list-style-type: none"> • 1.5ha B1, 0.9ha B2 and 0.9ha B8 expected by 2030. <p>Resultant daily rail trips: 35 arrivals and 35 departures</p>

		<p>Resultant daily rail trips: 124 arrivals and 124 departures</p>	
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14. The progression of the Loughborough University Science Park will provide increased growth in an area which already sees a high level of employment. Similarly, Leicester’s Urban Area developments should see an immense amount of growth within 5km of the Leicester station. Significant residential growth is also expected in Sileby and Market Harborough.

Castle Line

15. The Castle Line links Nottingham with Newark and Lincoln and saw major improvements in 2015, with passengers benefitting from more services and faster journey times. For Nottingham see Table 1, for Lincoln see Table 2.

Table 5: Castle Line Station Growth

Station	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Nottingham	See Table 1.		
Carlton		<ul style="list-style-type: none"> 2,038 proposed dwellings over 12 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 108 arrivals and 108 departures</p>	<ul style="list-style-type: none"> 12 ha of employment land coming from Teal Close and Gelding colliery. 1.3 ha B2 and 3.3 ha B8 expected by 2030. <p>Resultant daily rail trips: 35 arrivals and 35 departures</p>
Burton Joyce		<ul style="list-style-type: none"> 101 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 6 arrivals and 6 departures</p>	
Lowdham			<ul style="list-style-type: none"> 0.1 ha B8 expected by 2030. <p>Resultant daily rail trips: 1 arrival and 1 departure</p>
Thurgarton		<ul style="list-style-type: none"> 95 proposed dwellings in Flintham expected to be delivered by 2030. <p>Resultant daily rail trips: 5 arrivals and 5 departures</p>	
Bleasby		<ul style="list-style-type: none"> 38 proposed dwellings in Southwell expected to be delivered by 2030. <p>Resultant daily rail trips: 2 arrivals and 2 departures</p>	

Fiskerton		<ul style="list-style-type: none"> 120 proposed dwellings in Southwell expected to be delivered by 2030. <p>Resultant daily rail trips: 7 arrivals and 7 departures</p>	
Rolleston			
Newark Castle	<p>Level crossing refurbished in 2022.</p> <p>Improvements to station signage in 2022.</p>	<ul style="list-style-type: none"> There are over 7,000 new dwelling proposed with 3,150 of these coming from the development of the Newark Southern Link Road. 2,679 proposed dwellings over 18 sites including the above expected to be delivered by 2030. <p>Resultant daily rail trips: 142 arrivals and 142 departures</p>	<ul style="list-style-type: none"> 5,000 jobs from a number of sites, primarily in Newark South, Newark East and Fernwood. 7 ha B1, 5 ha B2 and 5 ha B8 expected by 2030. <p>Resultant daily rail trips: 175 arrivals and 175 departures</p>
Newark North Gate	<p>Improvements in 2018 included a new forecourt which provides parking spaces for short stays, a waiting area only, a new bus stop with digital displays and a taxi rank.</p>	<ul style="list-style-type: none"> 1,245 proposed dwellings over 11 sites including the above expected to be delivered by 2030. <p>Resultant daily rail trips: 66 arrivals and 66 departures</p>	<ul style="list-style-type: none"> 1.4 ha B1, 2.6 ha B2 and 3 ha B8 expected by 2030. <p>Resultant daily rail trips: 65 arrivals and 65 departures</p>
Collingham	<p>Level crossing upgrade in 2022.</p>	<ul style="list-style-type: none"> 51 proposed dwellings expected to be delivered by 2030. <p>Resultant daily rail trips: 3 arrivals and 3 departures</p>	
Swinderby		<ul style="list-style-type: none"> 972 proposed dwellings over 4 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 52 arrivals and 52 departures</p>	<ul style="list-style-type: none"> 2.2 ha B1, 2.2 ha B2 and 2.2 ha B8 expected in Within St Hughs by 2030. <p>Resultant daily rail trips: 67 arrivals and 67 departures</p>

<p>Hykeham</p>		<ul style="list-style-type: none"> 982 proposed dwellings over 16 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 52 arrivals and 52 departures</p>	<ul style="list-style-type: none"> Teal Park development site currently underway, 3.6 ha B1, 3.6 ha B2 and 3.6 ha B8 expected by 2030. <p>Resultant daily rail trips: 107 arrivals and 107 departures</p>
<p>Lincoln</p>	<p>See Table 2.</p>		

16. With the exception of Nottingham and Lincoln, the main areas of growth along this line are Newark, Hykeham, Swinderby and Carlton.

Poacher Line

17. The Poacher Line runs from Grantham to Skegness, but for the purpose of the report previous stations between Nottingham and Grantham are included. For Nottingham see Table 1, for Sleaford see Table 3.

Table 6: Poacher Line Station Growth

Station	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Nottingham	See Table 1.		
Netherfield			<ul style="list-style-type: none"> 0.3 ha B1, 0.8 ha B2 and 0.8 ha B8 expected by 2030. <p>Resultant daily rail trips: 18 arrivals and 18 departures</p>
Radcliffe			
Bingham		<ul style="list-style-type: none"> 1,510 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 80 arrivals and 80 departures</p>	<ul style="list-style-type: none"> 0.1 ha B2 and 0.1 ha B8 expected by 2030. <p>Resultant daily rail trips: 2 arrivals and 2 departures</p>
Aslockton		<ul style="list-style-type: none"> 41 proposed dwellings expected to be delivered by 2030. <p>Resultant daily rail trips: 2 arrivals and 2 departures</p>	
Elton & Orston			
Bottesford		<ul style="list-style-type: none"> 396 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 21 arrivals and 21 departures</p>	<ul style="list-style-type: none"> 1.4 ha B2 and 1.4 ha B8 expected by 2030 at Roseland Business Park. <p>Resultant daily rail trips: 23 arrivals and 23 departures</p>
Grantham	115 car parking spaces added in 2021. Ambitions for an upgrade of rail crossing and more road signs.	<ul style="list-style-type: none"> 1,641 proposed dwellings over 14 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 87 arrivals and 87 departures</p>	<ul style="list-style-type: none"> 1.2 ha B2 and 1.2 ha B8 expected by 2030 at Prince William of Gloucester Barracks. <p>Resultant daily rail trips: 20 arrivals and 20 departures</p>

Ancaster	Ambition for a new footway in the vicinity of the station.	<ul style="list-style-type: none"> 124 proposed dwellings over 3 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 7 arrivals and 7 departures</p>	
Rauceby		<ul style="list-style-type: none"> 65 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 4 arrivals and 4 departures</p>	
Sleaford	See Table 3.		
Heckington		<ul style="list-style-type: none"> 128 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 7 arrivals and 7 departures</p>	
Swineshead	Level crossing upgraded in 2020.		
Hubberts Bridge			
Boston	Levelling up funds for full refurbishment of the main station building and external areas, and new community and start-up business facilities.	<ul style="list-style-type: none"> 1,562 proposed dwellings over 17 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 83 arrivals and 83 departures</p>	<ul style="list-style-type: none"> There is 82 Ha of land to be provided across the Lincolnshire plan area, including extensions at the Riverside Industrial Estate and Endeavour Park in Boston. 4.4 ha B1, 3 ha B2 and 3 ha B8 expected by 2030. <p>Resultant daily rail trips: 107 arrivals and 107 departures</p>
Thorpe Culvert		<ul style="list-style-type: none"> 87 proposed dwellings over 3 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 5 arrivals and 5 departures</p>	

Wainfleet		<ul style="list-style-type: none"> 136 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 7 arrivals and 7 departures</p>	
Havenhouse			
Skegness	<p>Major tourist attraction on the Lincolnshire coast, so much higher usage in summer months.</p> <p>Tender underway for the full upgrade and refurbishment of the station.</p>		

18. The A46 corridor enhancements will see lots of new employment opportunities and homes built within the vicinity of Bingham, while the Spitalgate Heath development near Grantham will provide an immense amount of growth in the area. Other notable areas of growth along this line are in Boston where there are proposals for a high number of new dwellings within 5 km of the station.

Derwent Valley Line

19. The text below focuses on details for stations on the line between Matlock and Nottingham, Willington has also been included in this section. For Nottingham see Table 1.

Table 7: Derwent Valley Line Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Matlock		<ul style="list-style-type: none"> 1,320 proposed dwellings over 16 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 70 arrivals and 70 departures</p>	<ul style="list-style-type: none"> 0.8 ha B1 and 0.2 ha B2 expected by 2030. <p>Resultant daily rail trips: 11 arrivals and 11 departures</p>
Matlock Bath	New CCTV cameras to be installed in 2022.		
Cromford		<ul style="list-style-type: none"> 312 proposed dwellings over 4 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 17 arrivals and 17 departures</p>	<ul style="list-style-type: none"> 1.2 ha B1 and 0.9 ha B2 expected by 2030. <p>Resultant daily rail trips: 23 arrivals and 23 departures</p>
Whatstandwell		<ul style="list-style-type: none"> 61 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 3 arrivals and 3 departures</p>	
Ambergate		<ul style="list-style-type: none"> 370 proposed dwellings over 5 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 20 arrivals and 20 departures</p>	<ul style="list-style-type: none"> 0.4 ha B1, 0.4 ha B2 and 0.4 ha B8 expected by 2030. <p>Resultant daily rail trips: 12 arrivals and 12 departures</p>
Belper	New CCTV cameras to be installed in 2022.	<ul style="list-style-type: none"> 252 proposed dwellings over 2 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 14 arrivals and 14 departures</p>	<ul style="list-style-type: none"> Major mixed use development in Denby Bottles area including employment and 1000+dwellings. 2.4 ha B1, 10 ha B2 and 10 ha B8 expected by 2030.

			Resultant daily rail trips: 198 arrivals and 198 departures
Duffield	Track upgraded in 2022. Bid in place for work to improve accessibility by replacing the existing bridge with a new bridge with lifts and stairs at the car park end of the station.	<ul style="list-style-type: none"> 484 proposed dwellings over 3 sites expected to be delivered by 2030. Resultant daily rail trips: 26 arrivals and 26 departures	
Willington	New CCTV cameras to be installed in 2022.	<ul style="list-style-type: none"> 684 proposed dwellings over 8 sites expected to be delivered by 2030. Resultant daily rail trips: 37 arrivals and 37 departures	
Derby	Improved public realm and pedestrian links between the station and a new housing development in the Castleward area.	<ul style="list-style-type: none"> 3,217 proposed dwellings over 33 sites including large developments at and near the Castleward area expected to be delivered by 2030. Resultant daily rail trips: 171 arrivals and 171 departures	<ul style="list-style-type: none"> 2.8 ha B1, 2.8 ha B2 and 2.8 ha B8 expected by 2030. Resultant daily rail trips: 83 arrivals and 83 departures
Spondon		<ul style="list-style-type: none"> 1,295 proposed dwellings over 6 sites expected to be delivered by 2030. Resultant daily rail trips: 69 arrivals and 69 departures	<ul style="list-style-type: none"> 6.3 ha B2 and 6.3 ha B8 expected by 2030. Resultant daily rail trips: 106 arrivals and 106 departures
Long Eaton		<ul style="list-style-type: none"> 389 proposed dwellings over 14 sites expected to be delivered by 2030. Resultant daily rail trips: 21 arrivals and 21 departures	
Attenborough		<ul style="list-style-type: none"> 3,642 proposed dwellings over 6 sites including significant 	<ul style="list-style-type: none"> Numerous strategic developments expected to deliver 2.3 ha B1, 2.4

		<p>developments to the south of Clifton and around Toton expected to be delivered by 2030.</p> <p>Resultant daily rail trips: 193 arrivals and 193 departures</p>	<p>ha B2 and 2.4 ha B8 expected by 2030.</p> <p>Resultant daily rail trips: 70 arrivals and 70 departures</p>
Beeston	Improvements to station signage in 2022.	<ul style="list-style-type: none"> 3,642 proposed dwellings over 6 sites including significant developments to the south of Clifton and around Toton expected to be delivered by 2030. <p>Resultant daily rail trips: 167 arrivals and 167 departures</p>	<ul style="list-style-type: none"> Numerous strategic developments expected to deliver 2.3 ha B1, 2.4 ha B2 and 2.4 ha B8 expected by 2030. <p>Resultant daily rail trips: 172 arrivals and 172 departures</p>
Nottingham	See Table 1.		

20. The D2N2 strategic economic plan outlines a number of projects within Derbyshire and Nottinghamshire which should help the regions reach their growth targets. One of the main projects which will provide growth is Infinity Park, a prime 100-acre commercial and technology park located nearby to Peartree station, which is detailed in Table 8.

21. The 'Our City, Our River' scheme in Derby will provide a number of new homes and employment opportunities within 5km of Derby station. Further to this, Pride Park, which currently provides jobs for 13,000 people is expanding to deliver even more. Pride Park will be closer to Spondon station (within 2km), other current employment opportunities near Spondon include Severn Trent water and Balfour Beatty. Other key areas of growth along this line are in Attenborough and Beeston where there are plans for significant housing and employment growth in the near future.

Crewe to Derby

22. The text below focuses on details for stations between Crewe and Derby which fall within the East Midlands, for Derby see Table 7.

Table 8: Crewe to Derby Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Crewe	For stations between Crewe and Tutbury & Hatton please see the appropriate local authorities.		
Tutbury & Hatton		<ul style="list-style-type: none"> 840 proposed dwellings over 6 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 45 arrivals and 45 departures.</p>	<ul style="list-style-type: none"> 2.6 ha B1, 2.6 ha B2 and 2.6 ha B8 expected by 2030. <p>Resultant daily rail trips: 78 arrivals and 78 departures.</p>
Peartree		<ul style="list-style-type: none"> 1,161 proposed dwellings over 13 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 62 arrivals and 62 departures.</p>	<ul style="list-style-type: none"> 13 ha B2 and 13 ha B8 expected by 2030 at Infinity Park. <p>Resultant daily rail trips: 218 arrivals and 218 departures.</p>
Derby	See Table 7.		

23. As noted in the previous section, Infinity Park is one of the main projects providing significant growth in the vicinity of Peartree, bringing with it the potential for an increase in services which stop here. A considerable amount of new dwellings are also expected to be developed near Peartree as well as Tutbury & Hatton.

Robin Hood Line

24. The Robin Hood line runs from Worksop to Nottingham, via Mansfield. For Nottingham see Table 1.

Table 9: Robin Hood Line Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Worksop	Work took place in 2019 including strengthening the footbridge, refurbishing the station canopies and replacing lighting.	<ul style="list-style-type: none"> 861 proposed dwellings over 10 sites expected to be delivered by 2030. Resultant daily rail trips: 46 arrivals and 46 departures.	<ul style="list-style-type: none"> 0.3 ha B1, 2.2 ha B2 and 3.7 ha B8 expected by 2030. Resultant daily rail trips: 53 arrivals and 53 departures.
Whitwell		<ul style="list-style-type: none"> 158 proposed dwellings over 2 sites expected to be delivered by 2030. Resultant daily rail trips: 9 arrivals and 9 departures.	<ul style="list-style-type: none"> 3.6 ha B1, 3.6 ha B2 and 3.6 ha B8 expected by 2030. Resultant daily rail trips: 106 arrivals and 106 departures.
Creswell		<ul style="list-style-type: none"> 158 proposed dwellings over 2 sites expected to be delivered by 2030. Resultant daily rail trips: 59 arrivals and 59 departures.	
Langwith-Whaley Thorns		<ul style="list-style-type: none"> 104 proposed dwellings over 3 sites expected to be delivered by 2030. Resultant daily rail trips: 6 arrivals and 6 departures.	<ul style="list-style-type: none"> 0.5 ha B2 and 0.5 ha B8 expected by 2030 at Welbeck Colliery. Resultant daily rail trips: 8 arrivals and 8 departures.
Shirebrook		<ul style="list-style-type: none"> 1,069 proposed dwellings over 11 sites expected to be delivered by 2030. Resultant daily rail trips: 57 arrivals and 57 departures.	<ul style="list-style-type: none"> 0.5 ha B1, 0.1 ha B2 and 0.6 ha B8 expected by 2030. Resultant daily rail trips: 13 arrivals and 13 departures.
Mansfield Woodhouse		<ul style="list-style-type: none"> 1,932 proposed dwellings over 19 sites expected to be delivered by 2030. 	<ul style="list-style-type: none"> 0.01 ha B1, 0.05 ha B2 and 0.01 ha B8 expected by 2030.

		Resultant daily rail trips: 103 arrivals and 103 departures.	Resultant daily rail trips: 1 arrival and 1 departure.
Mansfield		<ul style="list-style-type: none"> 3,640 proposed dwellings over 41 sites expected to be delivered by 2030. Resultant daily rail trips: 193 arrivals and 193 departures.	<ul style="list-style-type: none"> 1.9 ha B1, 2.5 ha B2 and 2.7 ha B8 expected by 2030. Resultant daily rail trips: 69 arrivals and 69 departures.
Sutton Parkway	Plans for new cycle facilities which would link the station with Oakham Business Park.	<ul style="list-style-type: none"> 2,277 proposed dwellings over 29 sites expected to be delivered by 2030. Resultant daily rail trips: 121 arrivals and 121 departures.	<ul style="list-style-type: none"> 0.7 ha B1, 2.7 ha B2 and 2.7 ha B8 expected by 2030. Resultant daily rail trips: 55 arrivals and 55 departures.
Kirkby-in-Ashfield	Bid to receive funding to improve accessibility in the 2024-2029 AFA funding cycle.	<ul style="list-style-type: none"> 406 proposed dwellings over 8 sites expected to be delivered by 2030. Resultant daily rail trips: 22 arrivals and 22 departures.	
Newstead	Work underway to restore the station building into a new community space.	<ul style="list-style-type: none"> 904 proposed dwellings over 7 sites expected to be delivered by 2030. Resultant daily rail trips: 48 arrivals and 48 departures.	
Hucknall		<ul style="list-style-type: none"> 2,659 proposed dwellings over 19 sites expected to be delivered by 2030. Resultant daily rail trips: 141 arrivals and 141 departures.	<ul style="list-style-type: none"> 3 ha B1, 3 ha B2 and 3.5 ha B8 expected by 2030. Resultant daily rail trips: 96 arrivals and 96 departures.
Bulwell	Improvements to station signage in 2022.	<ul style="list-style-type: none"> 3,309 proposed dwellings over 31 sites expected to be delivered by 2030. 	<ul style="list-style-type: none"> 1 ha B1, 7 ha B2 and 7 ha B8 expected by 2030. Resultant daily rail trips: 130 arrivals and 130 departures.

		Resultant daily rail trips: 176 arrivals and 176 departures.	
Nottingham	See Table 1.		

25. The Sherwood growth corridor developments provides a number of areas of growth along this line, with many of these sites within close proximity of the mentioned stations. Plans at the Rolls Royce site will provide significant jobs and see an increase in housing within 5km of both Hucknall and Bulwell stations. Meanwhile developments at the A57/A60 junction near Worksop will provide another area of significant growth. Finally, a significant number of dwellings are expected to be developed in Mansfield and near Sutton Parkway.

Melton Mowbray to Luton Airport Parkway

26. The text below provides details on stations between Melton Mowbray and Luton Airport Parkway, Stamford is also included in this section.

Table 10: Melton Mowbray to Luton Airport Parkway Station Growth

<u>Station</u>	General and at/near Station Investments	Housing Growth Potential	Economic Growth Potential
Melton Mowbray		<ul style="list-style-type: none"> 3,599 proposed dwellings over 38 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 191 arrivals and 191 departures.</p>	<ul style="list-style-type: none"> 20ha of employment land as part of the Melton South Sustainable Neighbourhood and 10ha as extensions to the Asfordby Business park, both targeted towards the manufacturing and industrial sectors, expected beyond 2030.
Oakham	Footbridge repaired and improved in 2021.	<ul style="list-style-type: none"> 477 proposed dwellings over 8 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 26 arrivals and 26 departures.</p>	<ul style="list-style-type: none"> 1.3 ha B1, 1 ha B2 and 1 ha B8 expected by 2030. <p>Resultant daily rail trips: 36 arrivals and 36 departures.</p>
Stamford	Building refurbished, new canopies installed and platform resurfaced in 2017.	<ul style="list-style-type: none"> 396 proposed dwellings over 7 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 21 arrivals and 21 departures.</p>	<ul style="list-style-type: none"> 2 ha B2 and 2 ha B8 expected by 2030. <p>Resultant daily rail trips: 34 arrivals and 34 departures.</p>
Corby	Station platform extended in 2019.	<ul style="list-style-type: none"> 6,066 proposed dwellings over 23 sites expected to be delivered by 2030. This includes significant SUEs at West Corby, Priors Hall Park and Weldon Park. <p>Resultant daily rail trips: 322 arrivals and 322 departures.</p>	<ul style="list-style-type: none"> 0.4 ha B1, 0.6 ha B2 and 0.5 ha B8 expected by 2030. <p>Resultant daily rail trips: 15 arrivals and 15 departures.</p>

<p>Kettering</p>	<p>Station platforms extended, lighting, CCTV and public announcement systems installed in 2019. Canopies restored in 2021. Improvements to station signage in 2022.</p>	<ul style="list-style-type: none"> 3,010 proposed dwellings over 25 sites expected to be delivered by 2030. <p>Resultant daily rail trips: 160 arrivals and 160 departures.</p>	<ul style="list-style-type: none"> 0.2 ha B1 and 0.2 ha B2 expected by 2030. <p>Resultant daily rail trips: 4 arrivals and 4 departures.</p>
<p>Wellingborough</p>	<p>Canopies refurbished and former goods shed transformed in 2021, upgrades to lighting, CCTV and public announcement systems also carried out. Planning permission as part of the Stanton Cross development includes a 1,000 parking space car park.</p>	<ul style="list-style-type: none"> 6,018 proposed dwellings over 26 sites expected to be delivered by 2030. This includes the significant SUEs at Stanton Cross and to the north of Wellington station. <p>Resultant daily rail trips: 319 arrivals and 319 departures.</p>	<ul style="list-style-type: none"> 12 ha B1, 9 ha B2 and 15.5 ha B8 expected by 2030, spread over numerous sites. <p>Resultant daily rail trips: 360 arrivals and 360 departures.</p>
<p>Bedford</p>	<p>Bedford Borough Council's 2019 Rail Strategy includes aspirations for a remodelling of the station to create an interchange hub.</p>		
<p>Luton & Luton Airport Parkway</p>	<p>For stations between Luton and London please see the appropriate local authorities.</p>		

27. The expectation for growth along this line is great with many developments planned in the vicinity of the three main stations; Corby, Kettering and Wellingborough. Stanton Cross and other sites could lead to growth at Wellingborough Station in particular. Melton Mowbray is also expected to experience significant residential growth with commercial developments expected beyond 2030.

SUMMARY

- 28. Through this report SCP have highlighted all known areas of growth in and around the rail stations within the East Midlands Region.
- 29. Overall, the weekday patronage within the East Midlands has the potential to grow by 17%.
- 30. The stations which are expected to experience the most growth, in terms of the potential for new daily rail trips, are shown in the table below. Growth relative to the 2019/20 weekday patronage is also given within the table. Note some station growth appears especially high due to the very low existing use. This study assumes that a good level of service is provided at all stations.

Table 11: Stations with greatest predicted growth by number of additional trips

Number of additional daily trips (2019-2030)	Stations
1000 +	Wellingborough (▲50%) and Leicester (▲7%).
600-999	Nottingham (▲4%), Spalding (▲156%), Beeston (▲40%), Corby (▲75%), Newark Castle (▲28%), Lincoln (▲11%) and Bulwell (▲300%)
500-599	Althorpe (▲2022%), Syston (▲84%), Peartree (▲4859%), Chesterfield (▲10%), Attenborough (▲166%), Mansfield (▲45%), Ilkeston (▲141%) and Derby (▲4%).
400-499	Scunthorpe (▲42%), Hucknall (81%), Thornton Abbey (▲21119%), Ulceby (▲2080%), Belper (▲60%), Langley Mill (▲155%), Crowle (▲472%) and Alfreton (▲44%).
300-399	Market Harborough (▲14%), Melton Mowbray (▲46%), Boston (▲61%), Sutton Parkway (▲60%), Spondon (▲563%), Kettering (▲11%) and Hykeham (▲59%).

- 31. The most significant housing growth (over 500 additional daily rail trips) is expected in Leicester, Nottingham, Corby, Wellingborough and Althorpe whilst the most significant employment growth (over 400 additional daily trips) is expected within the vicinity of Wellingborough, Thornton Abbey, Ulceby, Peartree, Spalding and Crowle.
- 32. When compared to their current level of usage, the top 10 stations which have the most potential to increase their rail patronage proportionally should the level of service provided be suitable are: Thornton Abbey, Peartree, Brigg, Gainsborough Central, Thorpe Culvert, Kirton Lindsey, Ulceby, Althorpe, Spondon and Crowle.