Entities	Definition	Impact of Entity on Signaller Work
Regulating Locations	These are locations where timetabled services merge onto running lines and where a judgement is required by the signaller about which services gets priority. This can include locations where single lines converge with main running lines and locations where there are train movements into/out of depots and sidings. Regulating locations are normally defined in the working timetable and Sectional Appendix. It has been identified that just counting the number of regulating points does not give an accurate picture of the potential complexity of the route setting and regulating demand. It is recommended that further information is collected about the complexity factors at the regulating location that may make it more of less demanding and that this is then reflected in the interpretation of the data. Complexity factors that should be considered for each regulating location include: • Mix of traffic and speed • Volume of trains • Balance (i.e. the direction of the traffic. Trains all going in one direction present less of a regulating demand that trains that go in both directions) • Number of routing options • Number of conflict points	Regulating locations can vary enormously in the amount of regulating demand they create. Regulating generally involves signaller vigilance, planning and decision making to maintain timetable and accommodate delays.
Point Ends	Individual point ends that typically allow train movements to converge to and diverge away from the main routes. These include, for example, crossovers from up to down lines and connections into loops, sidings, yards, depot and the point ends found within a regulating location/junction. However, it doesn't include those point ends relating to ground frames as these are not operated by the signaller.	Point ends create a demand on the signaller because they increase the options available for routing trains and regulating. This has an impact on the vigilance requirements and decision making demands.
Points traversed	The number of point ends a train will pass over during its passage through the area of control. A complex move is one that is made and which involves the most set of points. It must be a timetabled move and often involves a freight train or movements out of sidings.	The demand created by this entity arises from the signaller's need to remain vigilant to whether a route is set correctly and subsequently becomes available or to regulate and intervene with system if not automated. This relies on the attention and a level of situation awareness from the signaller.
Timetabled Trains	Number of trains detailed in the working timetable. These trains have allocated, regular paths and stopping points. These may include empty coaching stock movements prior to and from booked services and freight movements.	The number of trains determines the routing demand which entails vigilance, planning as well as the physical activity of setting the route. The more trains, the less time the available to the signaller to plan and the more that needs monitoring.
VSTPs	These are trains that are in addition to those in the timetable. The signaller receives short notice notification of these trains. They typically include freight traffic, stock transit movements and light locomotive movements.	An additional demand is created for the signaller by having to accommodate over and above the traffic outlined in the timetable.

Entities	Definition	Impact of Entity on Signaller Work
Non-timetabled train movements	These movements are typically those that are not timetabled or VSTP but which require integrating onto the infrastructure. Typically these involve movements to and from yards, depots and sidings and can include run rounds, shunt moves and unit swaps.	The signaller is entirely responsible for accommodating these movements. They must integrate with other services which creates a planning and decision making demand on the signaller.
Level of perturbation	This refers to the level of delayed trains that the signaller has to deal with not the number of trains a signaller delays. PPM could give you an indication as to the level of late running trains	The demand that is created for the signaller by having to accommodate and regulate trains as a result of deviations from the timetable.
Line and train speed	Subtract the slowest train speed from the highest line speed (as indicated by the PSR) OR the fastest train, depending on which is lowest. For example, on an area which has train speeds of 125mph and 45 mph but a line speed of 70 mph then the calculation is 70mph-45mph. There may be occasions where even the fastest trains on an area will not attain the top line speed. In this instance it is the top train speed that is used in the calculation.	The characteristics of line speed impacts on the time for the signaller to react to traffic and the demand on their memory to control traffic if not automated.
Level Crossings (User Worked and all Others)	These are level crossings which require the signaller to afford protection to members of the public and to record their use. The member of public is required to contact the signaller for permission to cross. They typically include footpath crossings, farm crossings and barrow crossings. Some automatic crossings may require to be operated as a user worked crossing if the member of public requires to cross with long, slow and heavy vehicles. Requests at crossings can vary enormously depending on seasonal use or even use at different times of the day or during the week. The maximum number of requests should reflect the maximum number of requests during a peak use time. The count of requests to use the crossing should include requests that have been denied. The average number of requests count should reflect the number of requests during a non-peak time.	User worked crossings require the need to respond to the telephone and use of memory to await for the 2nd return call from the member of public who has requested to cross. At some locations (typically those that are not track circuited) the signaller has to employ strategies to determine where the train is before giving permission to cross.
Level Crossings (CCTVs & MCBs)	CCTV and MCB's are monitored and operated by the signaller who checks the crossing is clear before clearing the signals. Consideration should be given to the usage of these crossings and whether any of them are regularly mis-used by members of the public as this creates a particular demand.	CCTV's and MCBs need monitoring and operating at the appropriate time. This may require the signaller to split their attention between the crossing and the rest of the area of control and therefore the timing of the crossing operating can be important.

Entities	Definition	Impact of Entity on Signaller Work
Controlled signals	Signals that are directly controlled by the signaller to give movement authority, therefore require the signaller to physically operate to ensure route setting. This includes signals that have the facility to be placed in automatic, shunting signals, ground position signals but not subsidiaries signals. Subsidiary signals are always associated with a controlled signal but should not be counted as an addition to the controlled signal. When cleared, subsidiaries authorise the main signal to be passed at 'danger' for a move along the same running line to which the main signal applies, in circumstances when it is not appropriate to clear the main signal. It is worth noting the number of subsidiary signals and understanding what specific demands they create for the signaller.	This requires the signallers attention and a physical intervention. In addition there can be a demand on memory where signals are in auto but for certain trains/routes need to be put back on manual. Wrong routings can occur when the signal leaves a signal in auto.
Automatic signals	Signals that work automatically and do not require intervention except in an emergency or when providing track protection. This includes automatic signals with an emergency replacement facility (as indicated on the panel by an R or E letter above the signal) and automatic signals which are operated by the passage of trains. Some signals are identified with RR. These are repeater signals and should not be counted.	Signallers use auto signals to monitor the passage of the train. In the main this requires vigilance by the signaller but can require communications with drivers in an emergency.
Ground frames	Ground frames are released by the signaller and can then be used by an individual trackside operating the frame to manually divert train into sidings and assist in single line working.	There is an increased need for intervention and regulation by the signaller as once the ground frame is released the signaller has no access to the infrastructure.
Line blockages (T2/T12)	A line blockage provides protection to people working on the track using either the T2 or T12 arrangements. Some locations have guidance about the number of line blockages that can be authorised concurrently. As T2's and T12's are taken between trains they may be repeatedly taken and given up for the same piece of work (or WON Item). The count must include each occasion a T2/T12 is taken, not the number of WON entries.	Providing planned line blockages creates a demand because it requires communications with track workers, some decision making to determine whether the block can be granted and some consideration of the implications on the train service.

Entities	Definition	Impact of Entity on Signaller Work
Planned possessions and short notice possessions (T3)	Possessions are planned blockages of the line for engineering work using the T3 protection arrangements. The majority of engineering work takes place at night and weekends. However, there may be occasions when short notice possessions of the track are needed to rectify recently discovered, urgent track defects which otherwise would have an impact on the safe running of trains. They usually arise as a result of faults or problems identified during patrolling, or as a result of earlier infrastructure irregularities or failures.	Possessions involve 3 discrete phases and each phase has a slightly different impact on a signaller's workload. The taking phase typically involves a lot of communications, providing protection and checking of details between plans and arrangements real time. During the possession the signaller may be involved in train movements but it is generally a monitoring activity. Withdrawal of the possession involves communications and maintaining vigilance to ensure the line is given back to traffic appropriately and without allowing trains to run before the protection has been removed. Some possessions, particularly short notice ones, may create an additional regulating demand as the signaller will be required to manage trains around the possession where there have been no changes made to the timetable to accommodate the possession.
Planned and emergency isolations	These refer to the number of occasions when an isolation of the power to the infrastructure (either OHL or 3rd rail) is required. These tend to arise in connection with work on the track of the electrification equipment itself (either maintenance or renewals work) or in relation to incidents. Incidents that may required an isolation include de-wirements, flooding, trespassers, line side fires, removing obstructions from the OHLE or when passengers require de-training in the event of a train failure in a 3rd rail area, for example.	Isolations create a demand in terms of the associated paperwork and liaison with electrical control. In addition they can result in increased regulation and vigilance so that electric traction is not routed into isolated areas. Emergency isolations by their nature require the signallers immediate attention and priority. There may be an element of pressure in managing them and there will be an additional workload in terms of communications with the electrical control. In addition the signaller may need to block the affected area to electric traction which will have implications for the regulations workload.
Communications with depots, yards and sidings	Communications that take place between signallers and staff at depots, yards and sidings, including train crew relieving points. This typically includes communications relating to shunting, requests for information about the location of trains, requests to assist with radio testing. The communications referred to here are purely verbal.	Communications with depots, yards and sidings creates a demand because it relates to train movement, is not predictable and can often conflict with other activities
Station Operations	Station operations include splits, re-running, attachments, engine to opposite end attach/detach of carriages and carriages dividing.	Complexity in regulating trains within station. There may also be increased use of the radio to communicate with station staff.
Stations: Platforms used to terminate trains	Platforms where trains terminate. This includes trains that terminate but may turn around or be moved into sidings.	A platform where trains terminate requires additional work for the signaller in terms of changing the train describer and potentially coupling and splitting trains. Bay platforms in particular limit the options available for regulating. There may be some additional vigilance required for trains starting out from a platform, although Train Ready to Start (TRTS) is designed to assist in this. There may also be increased use of the radio to communicate with station staff.
Permissive Working	Permissive working permits more than one train to be in the same signal section on the same line at the same time (tends to refer to platforms). All locations are required to publish where permissive working is authorised in the special box instructions.	Permissive working influences the options available to the signaller for coupling and terminus traffic.

Entities	Definition	Impact of Entity on Signaller Work
Incidents & occurrences	These include operational events, safety of the line incidents and failures relating to the infrastructure or signalling control system. Operational events include events such as derailments, train failures, train equipment problems, trespass and vandalism incidents, level crossing mis-use, bridge strike incident or incidents of exceptional rail head conditions. Consideration should be given to the fact that some of these events may be seasonal. Infrastructure failures include track circuits, signalling and level crossing failures as well as axle counters reset restore functions failures.	The demand placed on the signaller is to make the incident/failure their immediate priority. They need to assess the situation in order to establish what has happened. There will also be additional communications (reporting the incident, liaising with affected parties etc) and an increased need for regulation and signaller vigilance to maintain timetable and accommodate delays.
Operating restrictions and special instructions	Operating restrictions and special instructions are procedures or arrangements relating to a specific location that control or affect the operation of the signal box and associated train working. They are mainly captured in Special Box Instructions but when scoring this entity consideration should be given to which of these arrangements or instructions are for information only (i.e., instructions relating to bridge strikes) and how often some of these instructions are implemented. Only those implemented more than once a year should be counted.	Special instructions are an indication of the weaknesses or peculiarities (often location specific) that exist within a signal box. They require the memory and the skill of the signaller to avoid incidents
Block system	This refers to types of block signalling system in operation at the signal box (i.e. track circuit block, absolute block, radio electronic token block)	The type of block system infers a level of intervention from the signaller. An AB system requires the signaller to deal with a train four times. Also signalling systems that operate with more than one type of block system requires the signaller to recall the rules and regulations for each system. This requires both their attention and memory of the rules.
Power systems	This refers to the traction power and whether it is provided by the AC (overhead) electrification, DC (3rd rail) electrification of whether it is diesel	Power systems create a demand because they impact on regulating decisions and a signaller must remain vigilant to the fact that certain types of trains cannot be routed into certain areas.