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| **Red Lists:** **Items that should be eliminated from the project wherever possible.** |
|  | * Any plant, equipment or supporting infrastructure / service that:
	+ can only be accessed via the operational railway (i.e. it is not in a depot, yard etc.)
	+ is in a red zone prohibited working area
	+ does not allow for the provision of a fenced green zone in the event of it needing attention during operational hours
	+ is not within a reasonable distance (500m) from an approved access point
	+ does not have a safe cess or walking route providing access to it
	+ can only be accessed by crossing an open line
	+ when worked on, necessitates working at height
	+ cannot be maintained / repaired without an “outage” due to microwave radiation
	+ cannot be maintained / repaired without causing an interruption to the rail service
	+ requires excessive manual handling
	+ is susceptible to vibration, dust, damp etc.
	+ is not secure or safe from vandalism, criminal activity and terrorist threat.
* Faults are not readily identifiable.
* System is reliant on fibre, cable or support from an external service provider.
* Equipment cannot be monitored remotely.
* Structures that will be lifted into position do not incorporate:
	+ lifting eyes
	+ safety nets
	+ fall arrest / fall restraint arrangements.
* Lack of adequate pre-construction information:
	+ health and safety file
	+ hazard directory
	+ asbestos surveys
	+ geology
	+ obstructions
	+ buried services
	+ ground contamination
	+ environmental impact assessment
	+ local instructions / arrangements.
* Roof mounted services requiring access for maintenance etc. without provision for safe access (e.g. walkways, barriers).
* Entrances, floors, ramps, stairs etc not specifically designed to avoid slips and trips during use and maintenance, including the effects of rain water and spillages.
* Environments involving adverse lighting, noise, vibration, temperature, wetness, humidity and draughts or chemical and / or biological conditions during operational use and maintenance operations.
* Any construction technique involving excessive noise, vibration etc. such that nuisance may be caused to neighbours.
* Processes giving rise to large quantities of dust (dry cutting, blasting etc.).
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| **Amber Lists:** **Items to be eliminated or reduced as far as possible and only specified / allowed if really unavoidable.** |
|  | * Heavy construction components which cannot be handled using mechanical lifting devices (because of access restrictions / floor loadings etc).
* Internal manholes / inspection chambers in circulation areas.
* External manholes in heavily used vehicle access zones.
* The specification of “lip” details (i.e. trip hazards) at the tops of pre-cast concrete staircases and other areas.
* The specification of shallow steps (i.e. risers) in external paved areas.
* The specification of heavy building blocks and construction materials such as sand, cement etc. (i.e. those weighing > 20kgs).
* The chasing out of concrete / brick / blockwork walls or floors for the installation of services.
* The specification of solvent-based paints and thinners, or isocyanates, particularly for use in confined areas.
* Site traffic routes that do not allow for ‘one way’ systems and / or vehicular traffic being segregated from site personnel.
* Site layout that does not allow adequate room for delivery and / or storage of materials.
* Need to use large piling rigs and cranes near the operational railway and overhead electric power lines or where proximity to obstructions prevents guarding of rigs.
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| **Green Lists:****Items to be positively encouraged** |
|  | * Faults are readily identifiable.
* Equipment can be remotely monitored
* Equipment is reliable and accurate.
* Thoughtful location of mechanical / electrical equipment, light fittings, security devices etc. to facilitate ease of access and away from crowded areas.
* Thoughtful location of mechanical / electrical equipment, light fittings, security devices etc. to facilitate ease of access during all weathers and during all seasons.
* Thoughtful location of mechanical / electrical equipment, light fittings, security devices etc. to facilitate access:
	+ without going on to the operational railway (i.e. in a depot, yard etc.)
	+ without climbing
	+ without requiring personal track safety qualification
	+ during operational hours and without an “outage” or an interruption to rail services.
* There is adequate access for construction and maintenance vehicles to minimise reversing / manoeuvring requirements (i.e. vehicular access in close proximity, one-way systems and turning radii).
* There is adequate access and headroom for maintenance in plant rooms, and adequate provision for replacing heavy components.
* The specification of pre-cast / finished products with pre-cast fixings to avoid drilling and on-site modification.
* The provision of adequate lighting such that the equipment, structure etc. can be worked upon during operational hours of darkness.
* Off-site fabrication, assembly and prefabricated elements to minimize on site work and hazards.
* Engineering controls are used to minimize the use of Personal Protective Equipment.
* Early installation of permanent means of access, and prefabricated staircases with hand rails.
* The provision of edge protection at permanent works where there is a foreseeable risk of falls after handover.
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