Permanent Way Institution

The Institution for Rail Infrastructure Engineers

Guidance Notes and Best Practice

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Applicable Gauging Standards

We operate within the bounds of several Group and NR standards, the main 4 RGS are:

- **GI/RT7073** – Requirements for the Position of Infrastructure and for Defining and Maintaining Clearances
- **GI/RT7016** – Interface Between Station Platforms, Track and Trains
- **GE/RT8270** – Assessment of Route Compatibility of Vehicles and Infrastructure
- **GM/RT2173** – Requirements for Size of Vehicles and Position of Equipment

Interpretation and The Hierarchy of RGS

GI/RT 7073 (positive clearance):

1.2.1.2 The prime requirement is that there are always to be **positive clearances** between rolling stock and rolling stock, or rolling stock and infrastructure (excluding items designed to be in contact)……..

Interpretation and The Hierarchy of RGS

GI/RT7016 (Target Platform position):

4.2.1 At platforms where the existing platform height or the existing platform offset does not meet the requirements set out in sections 3.1 and 3.2…..

GI/RT7016 (alteration and reasonable opportunity):

1.2.2.2 '**Alteration**' is therefore defined as 'the substantial lengthening or rebuilding of all or part of an existing platform and/or an associated structure, or renewal of station equipment or platform furniture, which provides a **reasonable opportunity** to bring the items concerned into conformity with the requirements of this document'.

NR STE guidance

Defining Alteration

Easier to define what isn't an alteration….
Requires simple rules to apply

Defining Reasonable opportunity

This will depend on a number of factors including size of project, desired outcome and unfortunately funding and timescales

Sometimes non-compliance is the option….

When compliance is not possible:

Flowchart to show route through the standards has been developed

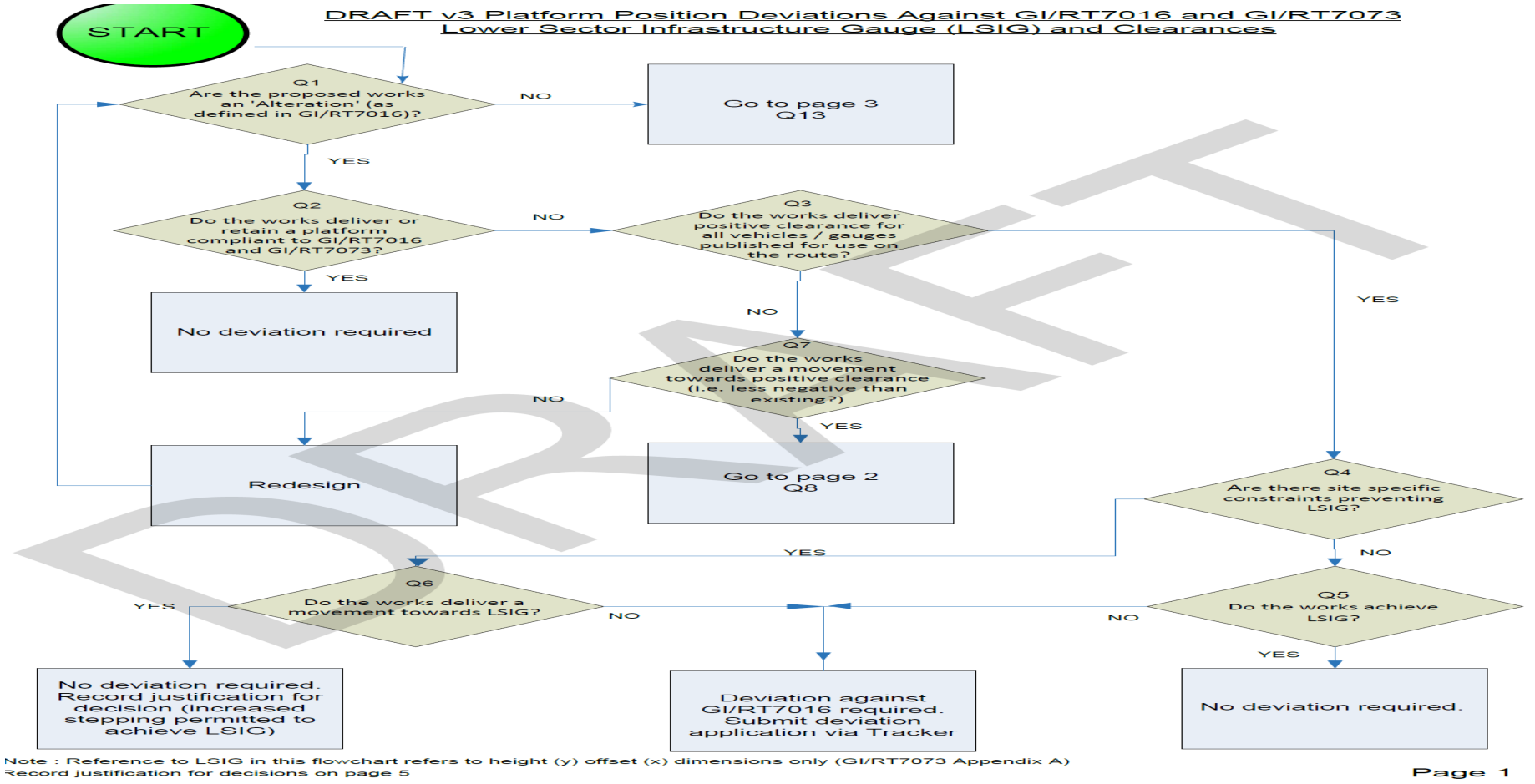
NR deviation review panel to run through any deviation applications prior to formal ISC application

Projects are required to demonstrate the following has been considered:

- Alternatives have been considered
- Risk has been fully considered
- Control measures will be implemented
- Stakeholders have been consulted

Compliance should be the first option considered

Sometimes non-compliance is the option….



Sharing Best Practice

How do we help collate and communicate best practice?

- Gauging Leadership Group – Quarterly NR meeting with gauging practitioners from STE, IP and Route teams
- Guidance notes
- NR Standard re-writes
- Development of Gauging competences

Under Development

Compliance against GI/RT7016

		Lateral Offset X (mm)		
		<730	730 - 745	>745
Height Y (mm)	>915	Tight High	Compliant High	Wide High
	890-915	Tight Compliant	Compliant Compliant	Wide Compliant
	<890	Tight Low	Compliant Low	Wide Low

- 5792 platforms in total
- 171841 individual measured points
- Is Wide worse than Low for PTI risk?
- How do we do a comparative risk rating for all our platforms?
- Independent of rolling stock variables
- Right side fail for sub<360m radius locations

Under Development

PTI Consequence Rating

		Lateral Offset X (mm)		
		<730	730 - 745	>745
Height Y (mm)	>915	3	2	0
	890-915	2	0	0
	<890	1	0	0

- Is Wide worse than Low for PTI risk?
- Can this inform ‘reasonable opportunity’?
- Enables network-wide comparative PTI risk model
- Enables before & after risk rating when passenger numbers are factored in

Under Development

Gauging Risk

		Lateral Offset X (mm)		
		<730	730 - 745	>745
Height Y (mm)	>915	0	0	2
	890-915	0	0	2
	<890	1	1	3

- Is Wide worse than Low for PTI risk?
- Can this inform ‘reasonable opportunity’?
- Enables before & after risk rating when passenger numbers are factored in

Under Development

Correction Opportunity

		Lateral Offset X (mm)		
		<730	730 - 745	>745
Height Y (mm)	>915	Maintenance Tamp to compliant	Maintenance Tamp to compliant	Maintenance Tamp to compliant
	890-915	Maintenance Tamp to compliant	no action required	Maintenance Tamp to compliant
	<890	Maintenance Tamp to compliant/low	Track renewal	Track renewal

- Can anything be done through routine maintenance or does it need track renewal?
- How do we ensure maintenance activity does not increase risk?
- Can this feed into Route asset management plans?

Questions?