

Magna New Tram Stop

Talk by:

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Project Stakeholders



AMCO·GIFFEN

HBPW
CONSULTING ENGINEERS

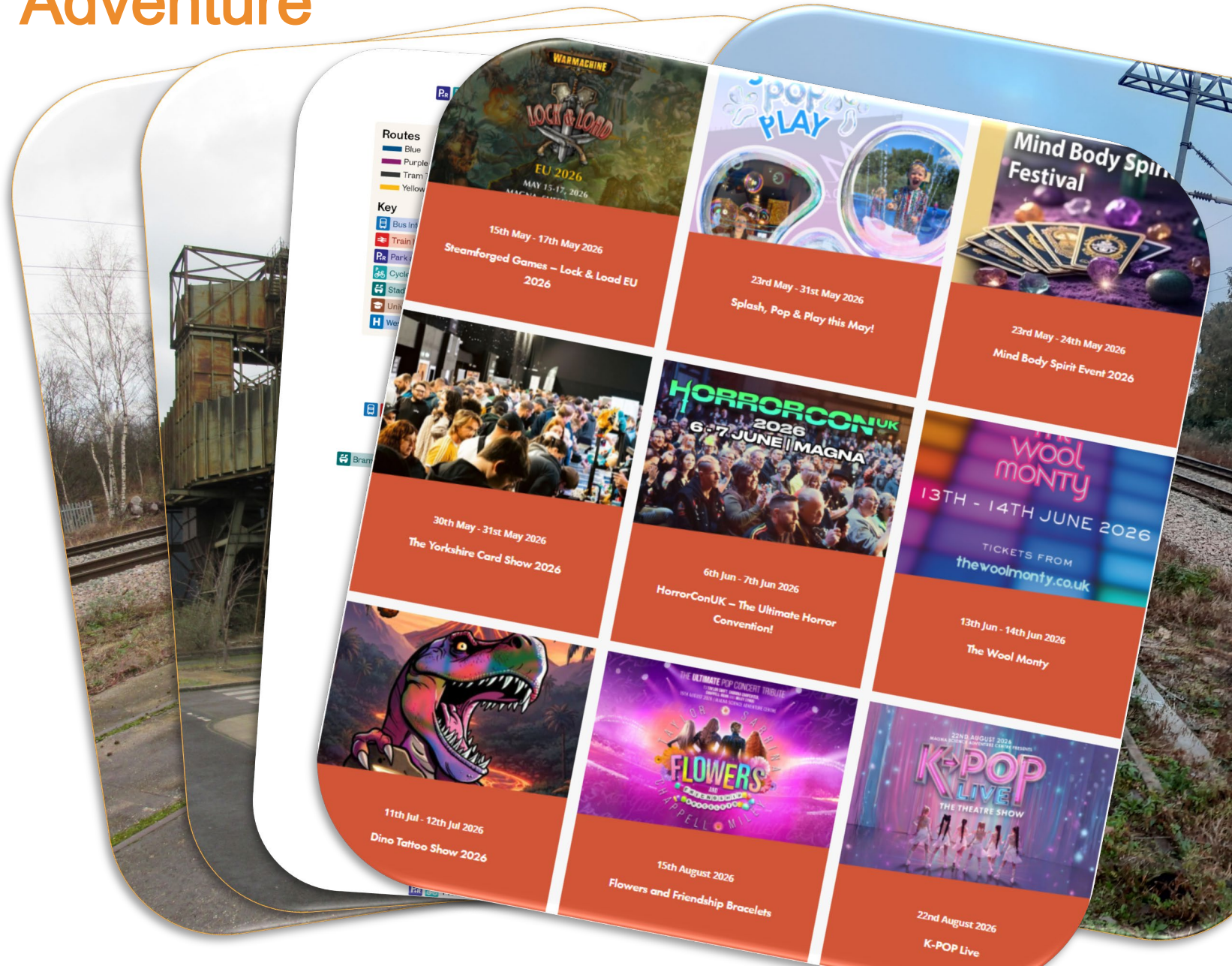
Magna New Tram Stop

- Building on the success of the Tram Train scheme
- SYMCA funded scheme
- First dedicated Tram Stop on Heavy Rail
- First Tram Stop on SYFTL / (Super Tram) network to be serviced by Footbridge and Lifts
- 750V DC overhead line
- Designed and Constructed locally
 - Designers HBPW Sheffield based
 - Fabricated in AmcoGiffen's Barnsley facility



Magna Science and Adventure Park Rotherham

- Regeneration of the area
- Provide Park & Ride facilities
- Improve connectivity between Sheffield and Rotherham
- Access to Magna & Events



Environmental



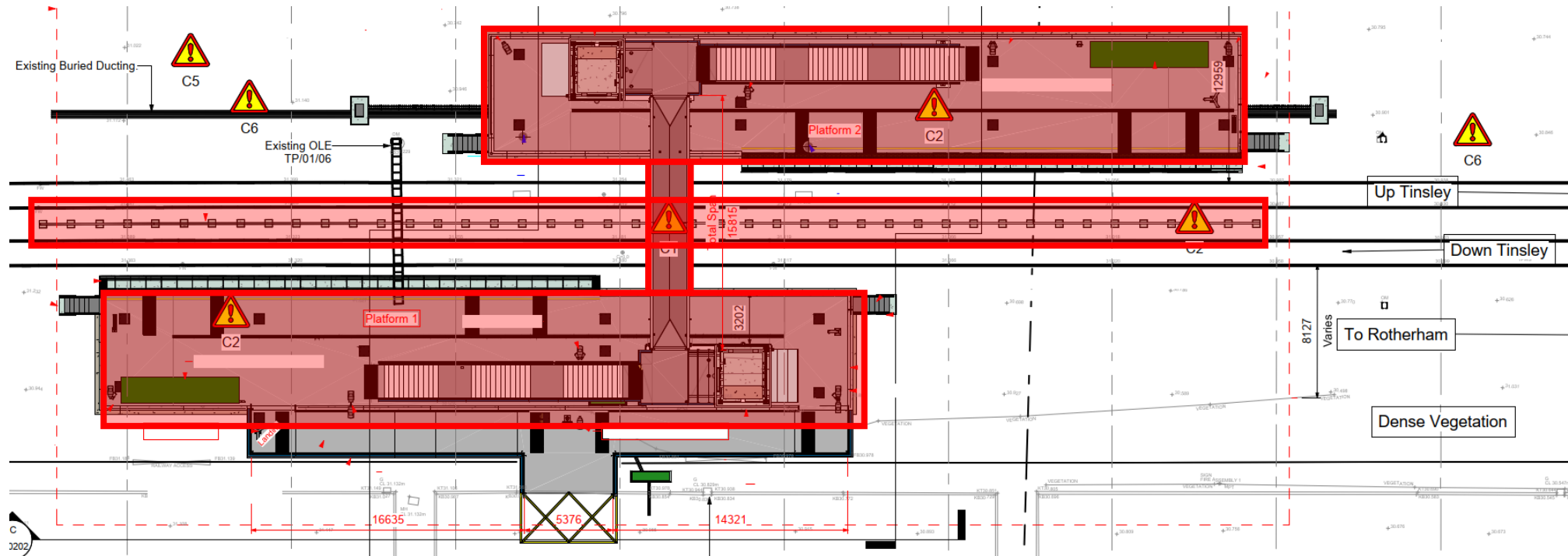
Himalayan Balsam on
Platform 2 to be
removed

Contaminated material
in the redundant
steelworks siding to be
removed



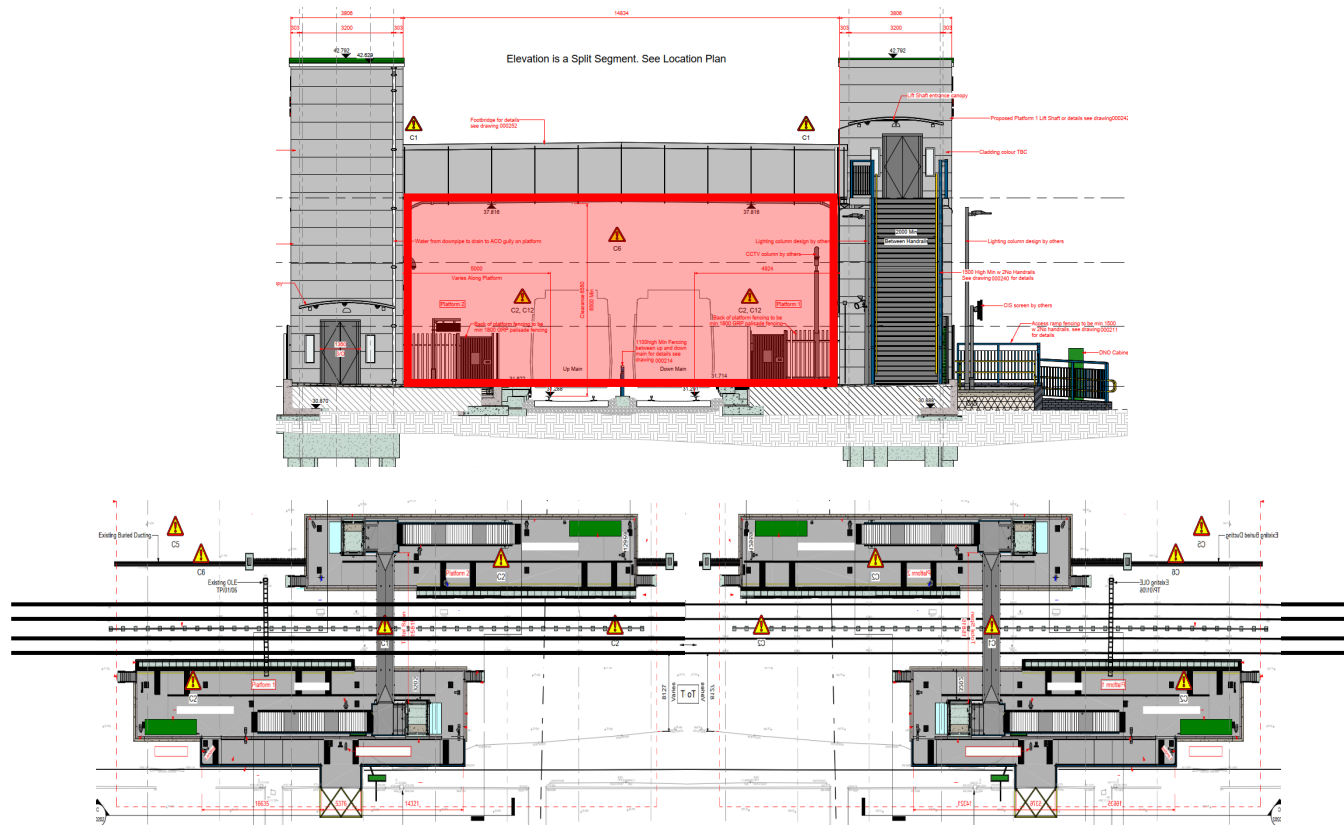
Lessons from the original scheme

- Platforms to be staggered to reduce risk of crossing the lines
- Fence in 6 foot to further deter trespass



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- Foot bridge raised to remove OLE height adjustment
- Station “mirrored” and moved away from OLE overlap to remove major OLE alterations

Engineering assurance

- Developed under Network Rail

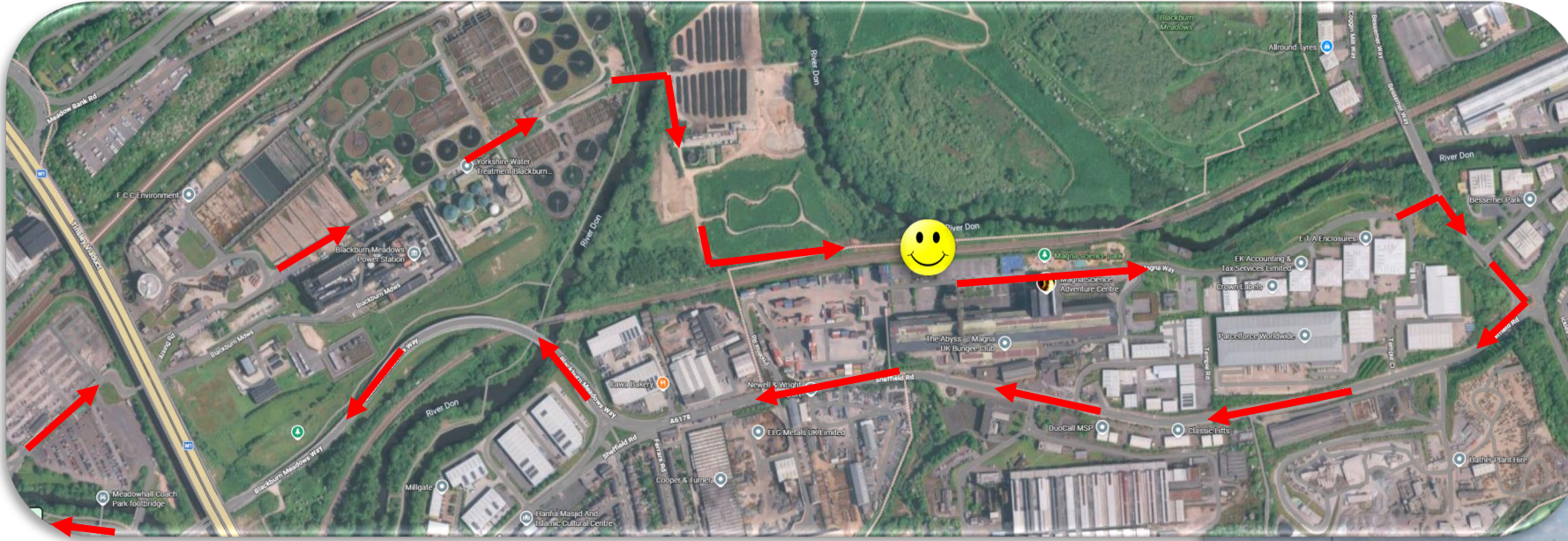
SPEED

Swift P r a g m a t i c E f f i c i e n t E n h a n c e m e n t D e l i v e r y

- Project taken from optioneering to detailed design
- Missing AIP saved 6 months & circa £500k
- Design delivered under the Network Rail Agile Client Eastern assurance model



Land Access



- Platform 2 landlocked
- Temporary haul road had to be constructed
- Land agreement required with Yorkshire Water
- 20 minute drive between platforms

Temporary Footbridge

- Scaffolding bridge was built for crossing track
- Gave easy access between platforms
- No need for welfare on both platforms



Platform riser wall construction



Vacuum excavation used
around S&T cables and
services

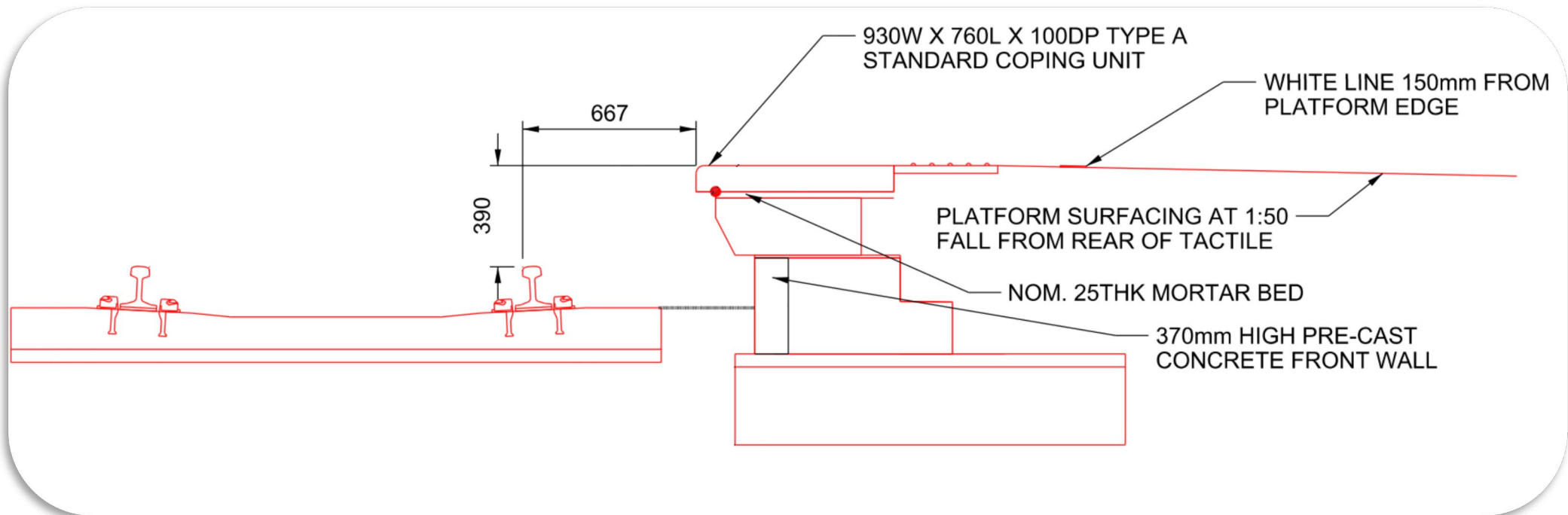


New pre - cast front and rear
riser wall installed using
excavators from CESS



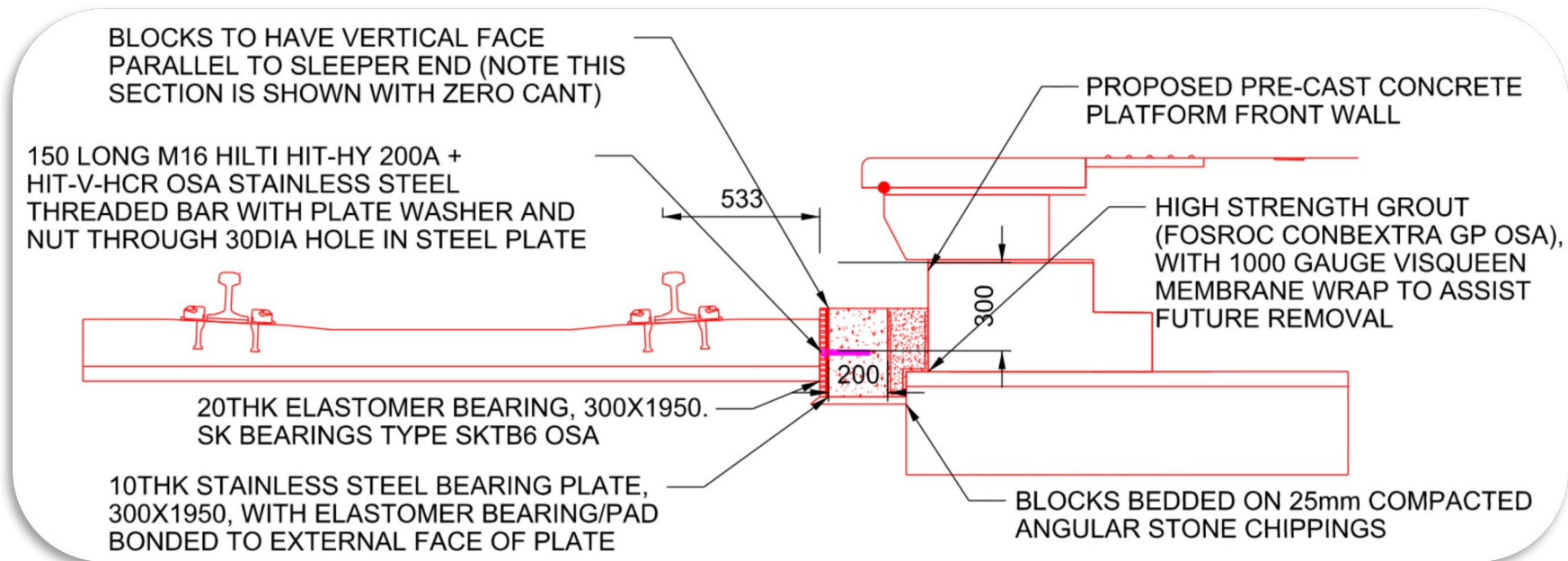
Platform / Track Interface

- Tight construction tolerances
- Track position from coper to rail
 - Horizontal 667mm to 672mm (5mm variance)
 - Vertical position 390mm to 400mm (10mm variance)



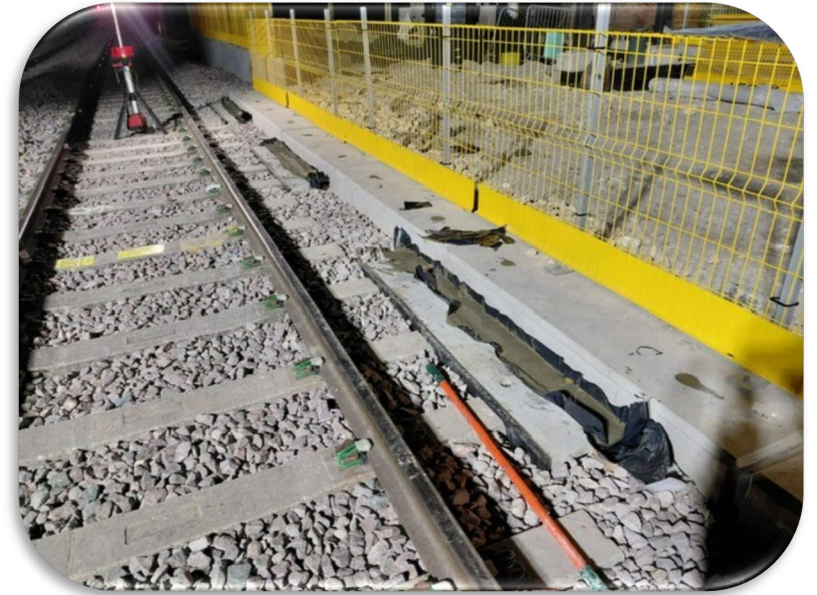
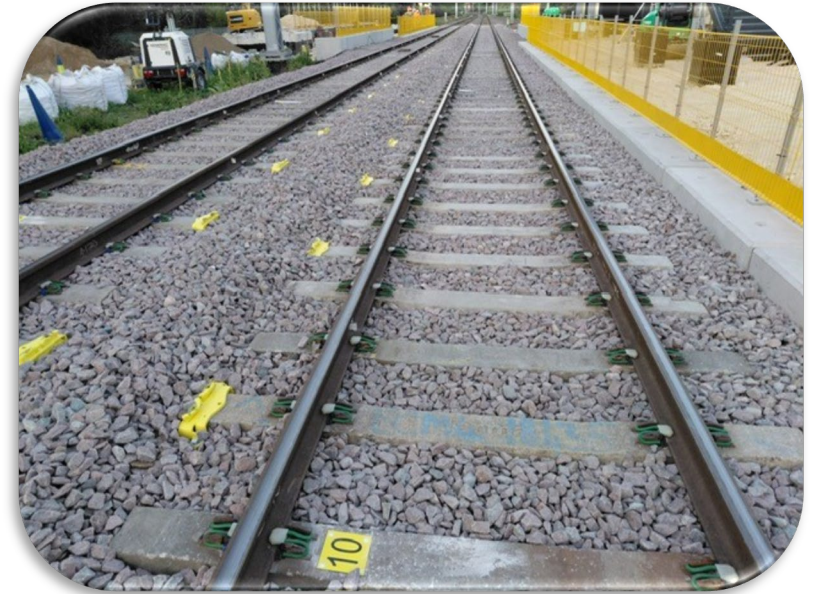
Platform / Track Interface

- W6A and light rail gauging not compatible for normal track fixity
- Medium track fixity required
- Longitudinal concrete blocks used between sleeper end and riser wall to fix track
- LERPS used to transition track stiffness



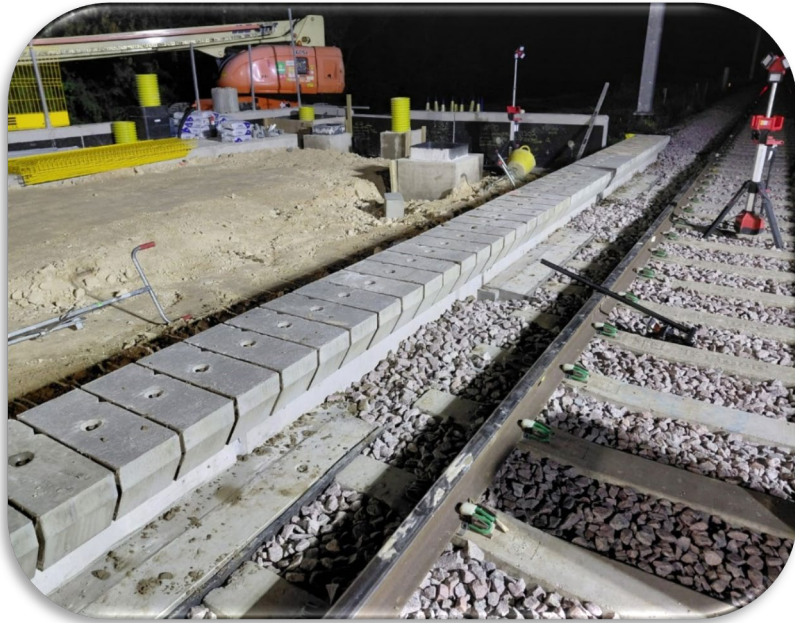
Track Works

- Existing sleepers were steel and unsuitable for the track fixity system
- Steel sleepers had been retained as part of the original Tram Train scheme
- Steel sleepers removed and concrete sleepers installed
- Finally longitudinal concrete blocks installed to lock up sleepers
- Track tamped to final alignment



Over - sail blocks and copers

- Derogation required for no platform refuge
- Over sail blocks installed



- Platform copers installed using platform gauge from “locked” running rail
- And this is why.....



Meanwhile back in Barnsley.....



AmcoGiffen's internal fabrication team were constructing the new lift shafts, stairs and bridges



Our lift shafts are now fully clad in our fabrication trail erection area

Then it all came together



Lifting undertaken with
our bespoke reusable
lifting frames



Fully clad Lift shafts and lift
motor rooms are tandem
lifted “top and tailed” to lift
vertically



Fully clad lift shafts means no
scaffolding needed

Then it all came
together



Sequence of installation

- Lift shaft
- Lift motor room
- Staircase

Then it all came together

And finally..... The new bridge deck



The final stages



- Platform drainage installed and backfilled
- Tactile paving installed

- Platform surfacing completed
- Lighting and PA systems commissioned



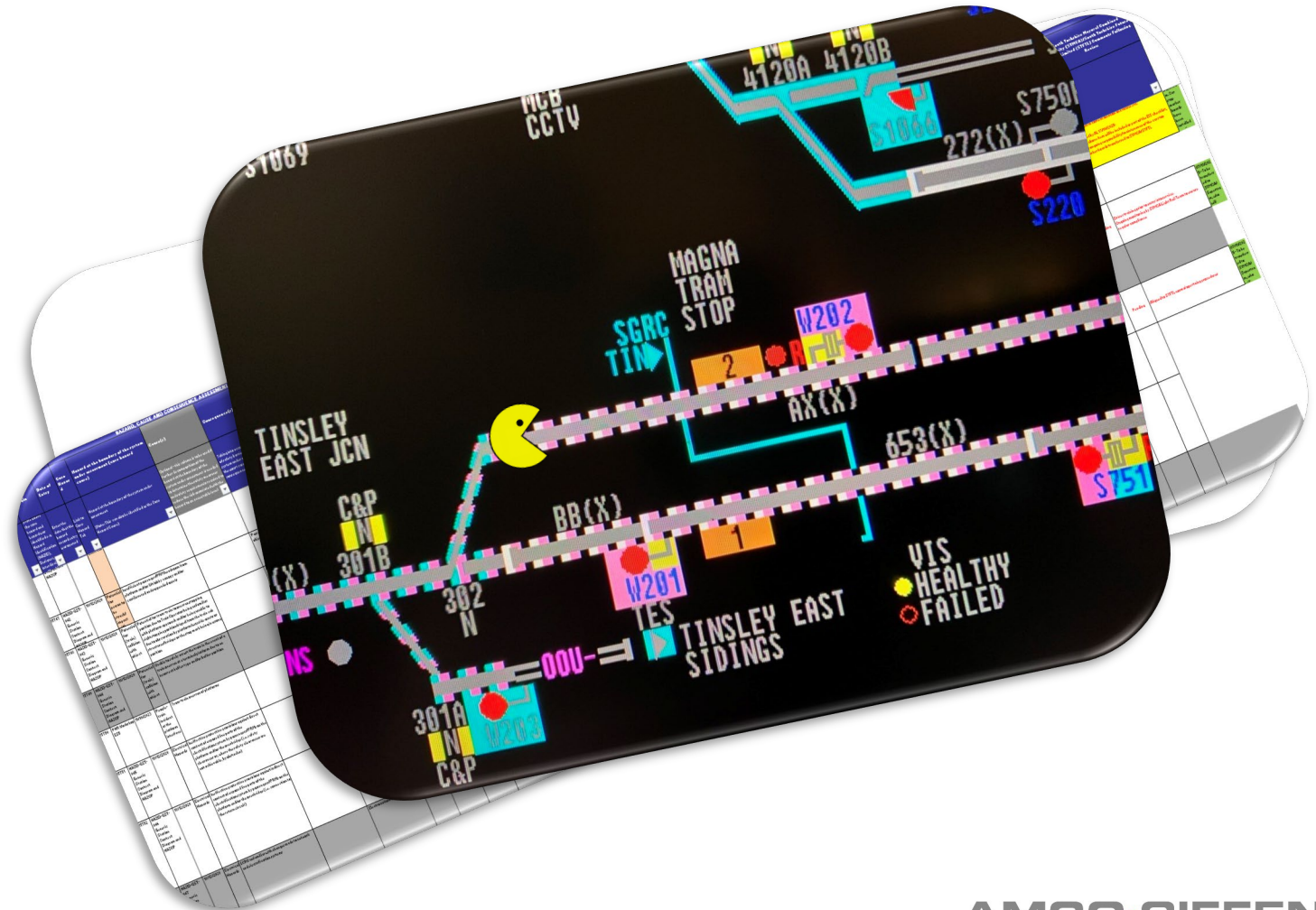
- 6 foot fencing installed for anti-tresspass



Entry into Service

A number of activities needed in the background to enter the new tram stop into service

- Updates to Signalling Scheme Plans
- Lift telecoms routed SYMCA control rather than Network Rail
- Close out of CSM and hazard record with the AsBo as the project was Significant but not interoperable
- The final commissioning included the signalling panel changes in York ROC



Park & Ride

- Inefficient use of area to maximise parking spaces



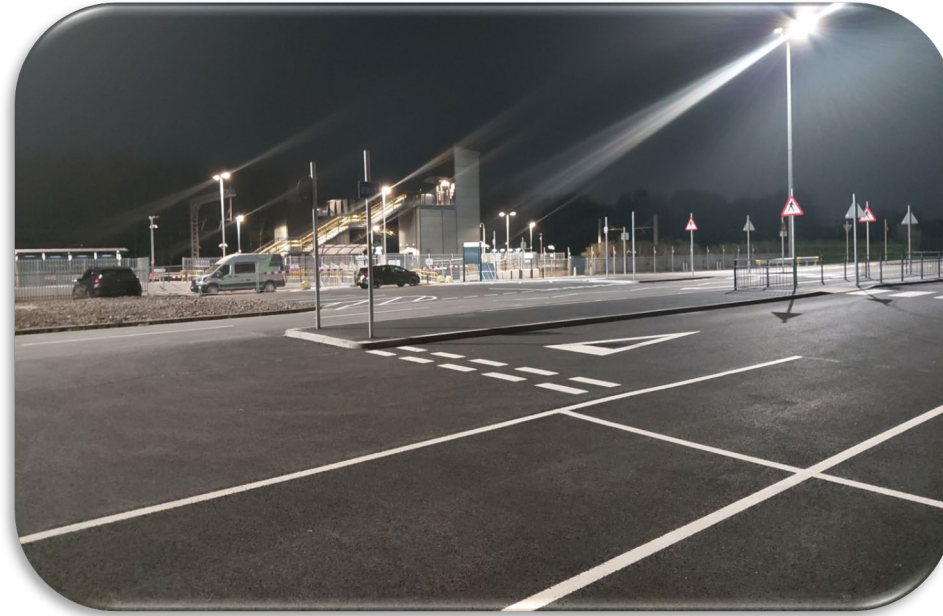
- Existing car part under utilised and in need of maintenance



Park & Ride



- Pedestrian routes into the tram stop created



- Splitter island removed

- Disabled parking added



And on the 6th of April the new Magna
Tram Stop was opened on time and on
budget





Thank you for listening