# Passengers on board 2010

## LUAS

### Sandyford to Cherrywood (Line B1)

Construction Update

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9

February 2009







Plinth pour at Glenamuck Bridge

#### TRACK AND CIVIL WORKS

#### **Burton Hall Road Junction**

In January the traffic island at the eastern side of Burton Hall road junction, closest to the bridge ramp, was completed which has improved the road alignment. Works during February will include the installation of the traffic signals and the completion of the footpaths and lay-by adjacent to the ramp.

Following completion of these works road surfacing and grading to final levels at the crossroads of Blackthorne Avenue and Burton Hall Road will commence. This work will require temporary traffic management arrangements which will involve the re-adjustment of lanes and realignment of the approaches from the Brewery Road Roundabout.

#### Blackthorn Avenue

The footpaths have been completed along Blackthorne Avenue. Over the coming months the existing road surface will be systematically replaced by the final road surfacing followed by the installation of public lighting. Temporary traffic management arrangements will continue to be in place, and will be rearranged to cater for the sequence of works. As the works progress these temporary traffic arrangements will reduce as the permanent road layout is implemented.

#### Works on the podium of the Brewery Road Bridge

The track installation works are progressing from the Burton Hall Road junction onto Brewery Road Bridge. This work should be finished in March and will be followed by the installation of foundations for the overhead contact system (OCS).

#### Sandyford Stop

In January the civil works for the 13 metre extension of the outbound platform at the Sandyford stop were completed. The fence lines have now been switched to facilitate the extension of the inbound platform. Temporary pedestrian and passenger management arrangements have been put in place to facilitate the extension works, while maintaining access to the trams. These works will be ongoing through February and March, and passengers are asked to heed all signage and barrier arrangements in the area. The new footpath from the North side of the Sandyford depot is complete and is open for pedestrian access to the Sandyford stop.

#### **Sandyford Depot**

Works in Sandyford Depot are now substantially complete. The Contractor will hand over the Depot to RPA ready for the arrival of new trams.

#### **Glencairn Stop and Substation**

The area surrounding the proposed Glencairn stop has now been fenced off to allow the construction of a new underground substation. Excavation work has begun to facilitate this structure.

#### **Central Park/Vodafone**

Site clearance and enabling works commenced in this area in January, with works now progressing onto the podium from Brewery Road Bridge.

#### **Ballyogan Road**

The works along the Ballyogan alignment are scheduled to step up significantly during February, and will entail excavation works in the track formation to install drainage and ducting layouts. This will increase the presence of construction plant machinery within the construction site and also exiting out onto the public roads.







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#### Works from Luas Bridge at M50 Junction 15 (Carrickmines Bridge) to Cherrywood

The building of retaining walls is ongoing in the area between Glenamuck and Cherrywood. Drainage and ducting installation has also commenced in this area. Major groundworks are taking place adjacent to the Tullyvale section to level out the earth banks to the correct height for the tracks and this work will be ongoing for several months.

#### Spine Road Underpass

The trackworks and the concrete plinths are now substantially complete within the underpass and the installation of emergency walkways and cable ducting will commence shortly.

#### **UTILITY DIVERSIONS**

#### **Ballyogan Road**

Carriageway works are nearing completion, with the installation of the final wearing course and road markings due to commence in early March, subject to weather conditions. Traffic signs and signals at the junctions along Ballyogan Road will be installed in February. A speed limit of 30 kph is currently in place on the temporary surfacing. This speed limit is enforceable by the Gardai and everybody, including pedestrians, are requested to obey the temporary directions signs.

### TRACK INSTALLATION – A STEP BY STEP PROCESS

RPA's contractor SBS is now working on the tracks and different areas of the alignment are at different stages of construction. This image gives an overview of the different stages of the track installation works.

#### Different steps explained

- **Step 1** Excavate the roadway to the correct depth.
- Step 2 Install ducts which will carry the power and systems
- Concrete shoulders

  Tarmac Surfacing

  Tarmac Base

  Concrete slab

  Steel mesh

  Steel mesh

  Concrete foundation layer

Section view through the track slab

- Step 3 Reconstruct the ground level in layers to ensure a solid base for the reinforced concrete track slab.
- **Step 4** Construct the base layer of the reinforced concrete track slab. The reinforcement consists of two layers of steel mesh inside the concrete.
- **Step 5** Deliver the rails to site once the structural reinforced concrete slab has achieved the required strength. A straight piece of track is 18 meters long on average.
- Step 6 Apply rubber coating to rail.
- **Step 7** Align the rails into the correct position and raise them to the correct level.
- **Step 8** Weld the rails together to form the track.
- Step 9 Pour second layer of concrete to a level halfway up the rail.
- **Step 10** Construct the exposed aggregate concrete shoulders on either side of the rail up to the top of the rail. These "shoulders" are created to protect the rubber around the rails and prevent it from being damaged by vehicular traffic.
- Step 11 Install the finished tarmac surface between the concrete shoulders.











