➢ What is the **Schelle-Malderen-Mechelen project?**

The Schelle-Malderen-Mechelen project is an initiative being undertaken by electricity grid operator Elia to make various adjustments to the area's high-voltage grid. It comprises four subprojects:

Schelle high-voltage substation

Winding and unwinding apparatus at the 70-kV Schelle-Mechelen line. This apparatus literally rolls up the overhead line.

Subproject ① — Dismantling of the 70-kV overhead line between Schelle and Mechelen

Work on this subproject started in February 2017. The 70-kV overhead line between Schelle and Mechelen runs for 16 km and consists of 82 pylons. This line was completely dismantled in late 2017.

Subproject ② — Adjustments to high-voltage substations in Schelle, Malderen and Tisselt

Elia will make the appropriate adjustments to the high-voltage substations in Schelle and Malderen and upgrade the Tisselt high-voltage substation from 70 to 150 kV.

Subproject ③ — Laying of a 150-kV underground cable between Malderen, Tisselt and Mechelen

Elia will lay a new 150-kV underground cable between the Malderen, Tisselt and Mechelen high-voltage substations. This new cable will ensure continued security of supply for the area in the future.

Subproject ④ — Dismantling of the 70-kV overhead line between Malderen, Tisselt and Mechelen

The 70-kV overhead line between Malderen, Tisselt and Mechelen runs through the municipalities of Londerzeel, Willebroek, Kapelle-op-den-Bos and Mechelen. A 9.7-km section of the line will be dismantled, and a total of 69 pylons demolished.

Where is Elia rolling out these subprojects?

The Schelle-Malderen-Mechelen project crosses nine municipalities: Schelle, Niel, Aartselaar, Rumst, Mechelen, Londerzeel, Willebroek, Puurs and Kapelle-op-den-Bos.

Subproject ①

The 70-kV line being dismantled between Schelle and Mechelen passes through the municipalities of Schelle, Niel, Aartselaar, Rumst and Mechelen.

Subproject ②

The high-voltage substations where Elia is making adjustments are in the municipalities of Schelle, Malderen and Willebroek (Tisselt).

Subproject ③

The new 150-kV underground cable crosses the municipalities of Londerzeel, Willebroek, Puurs, Kapelle-op-den-Bos and Mechelen.

Subproject ④

The 70-kV line being dismantled between Malderen and Mechelen passes through the municipalities of Londerzeel, Willebroek, Kapelle-op-den-Bos and Mechelen.

Why is the Schelle-Malderen-Mechelen project necessary?

Work on the high-voltage grid is necessary for three reasons:

Two 70-kV lines have reached the end of their service lives

The 70-kV line between Schelle and Mechelen is almost a century old and the line between Malderen and Mechelen dates back to 1932.

New 150-kV cable to ensure security of supply

This new underground cable will replace the 70-kV line between Malderen and Mechelen. The cable's higher voltage level means that it will also ensure continued security of supply in the future.

Work on the high-voltage substations to make grid upgrades possible

Adjustments need to be made to the three high-voltage substations covered by subproject 2 as part of the dismantling of the 70-kV lines. The electrical equipment in these substations also needs to be replaced.

Cable route and work schedule

The cable in Willebroek and Kapelle-op-den-Bos consists of six sections. These cable sections will be interconnected in trenches.

Bessemstraat – Beekstraat	Beekstraat	Beekstraat – Westdijk
Early January 2020 – late March 2020	Mid-March 2020 – early May 2020	Late April 2020 – late June 2020
Overloopstraat – Hoogstraat	Hoogstraat – Kleine Heide	Kleine Heide – Rennekouter
Late February 2020 – late May 2020	Late April 2020 – mid-July 2020	Early January 2020 – mid-April 2020

This schedule is indicative and may change due to weather conditions.

At the start of work on a section of cable, Elia will send a letter to local residents notifying them accordingly.

elia
| Elia Group

How does Elia lay a 150-kV underground cable?

Step 1 — Preparatory surveys

- A detailed study determines the exact location of the cable.
- In doing so, Elia sticks to public land as much as possible.
- Signs are set up to indicate work areas, and diversions are organised.

Step 2 — Digging and shoring up trenches

- Trenches are 0.8 metres wide and 1.4 metres deep. A trench between 500 and 800 metres long is dug for each cable section. It takes two months to complete each section.
- Shoring equipment keeps the sides stable and drainage pumps keep the trench dry if necessary. A work area five metres wide is established along the trench.

Step 3 — Directional drilling

- Directional drilling ensures that there is no disruption at major intersections (such as motorways, crossings, railways and canals).
- A work area is required in order to set up the drilling machine.

Step 4 — Pulling cables in different types of trench, filling the trenches

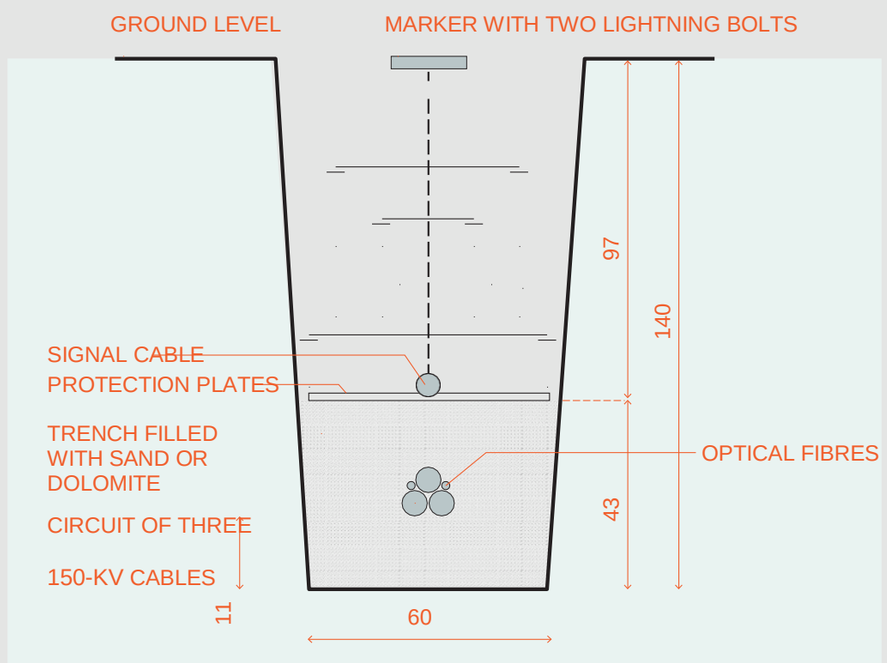
- Circuit of three cables
- A cable reel is used to pull cables over a distance of around one kilometre.
- Elia installs connection sleeves where two cables are connected.
- Cables are laid in a special type of sand in order to control the temperature. Protective plates, warning tape and markers are placed on top of the cables.
- The trench is then filled in, and the area restored to its original state.

What does a 150-kV **underground line look like?**

The new 150-kV cable comprises a circuit of three cables laid in a trench.

Type A trench

- Standard and most common trench type
- Open trench in which the cables are laid in a trefoil formation
- Depending on whether there are other utility lines nearby, the cable may be laid deeper in places.
- Cables are also laid deeper in fields.
- This means that farming can continue without damaging the cable.



Type B trench

- Temporary open trenches in which polyethylene conduits are laid
- These conduits are reinforced with concrete up to the protection plates.
- The cables are then pulled through the conduits.
- Used at intersections
- Prevent trenches from obstructing passage for long periods
- Also used for work that crosses driveways, other utility lines or sewers

Directional drilling

- Used for work on waterways, busy intersections or crossings where type B trenches are not an option
- Drill bits and drilling rods are used to dig a tunnel in which a conduit is laid.
- The cables are then pulled through this conduit.
- This technique is used at major intersections to avoid having to dig an open trench.

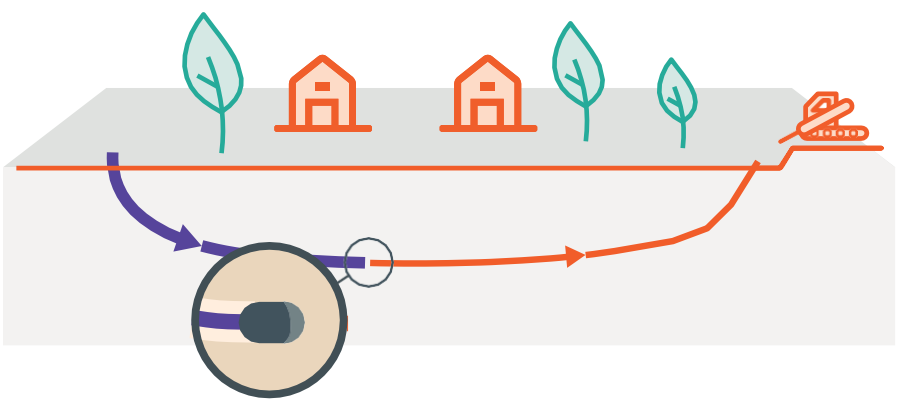
What does an underground cable look like?

Directional drilling

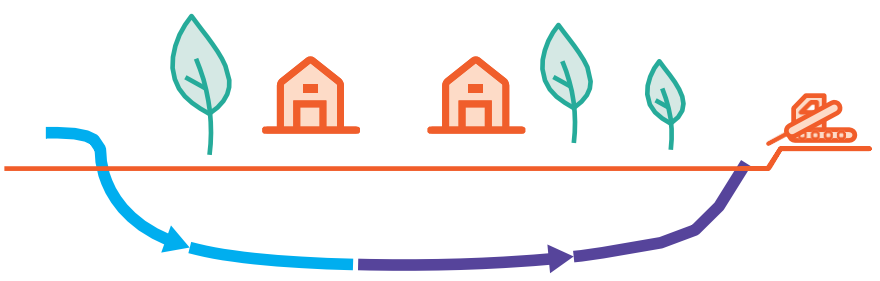
Directional drilling is a trenchless drilling technique used to lay a cable under waterways, busy intersections and railways.

1 Pilot drilling

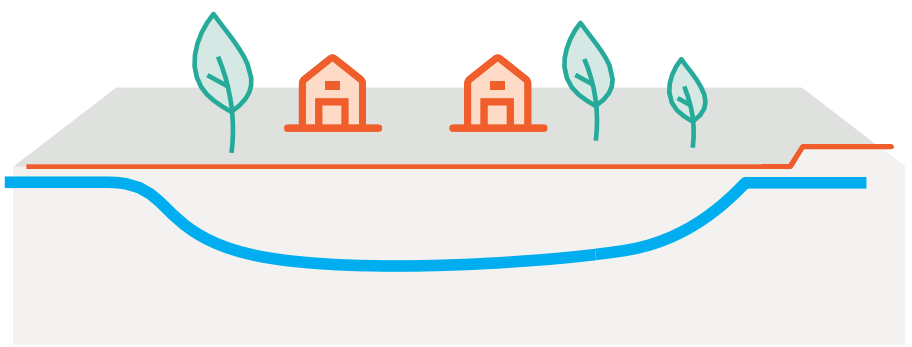
2 Drilling channel widened



3 High-voltage cable pulled



4 Final phase



Traffic diversions during closure of Bessemstraat

— **Bessemstraat** will be **closed from early January 2020 to late March 2020**. The street around the worksite will only remain open to local traffic during this time.

— **Through traffic** will be **diverted** via Tisseltstraat, De Beughemlaan and Oudemanstraat.

elia | lia Group

Traffic diversion during closure of Beekstraat

— **Beekstraat** will be **closed from mid-March 2020 to early May 2020.**
The street around the worksite will only remain open to local traffic during this time.

— **Through traffic** will be **diverted** in both directions via Tisseltstraat, Bormstraat and Westdijk.

elia
| lia Group

Traffic diversion during work on Overloopstraat

- Only **through traffic heading towards Hoogstraat will be permitted** during work on **Overloopstraat.**

- **Traffic** coming **from Hoogstraat** will be **diverted via Brielen to Overloopstraat.**

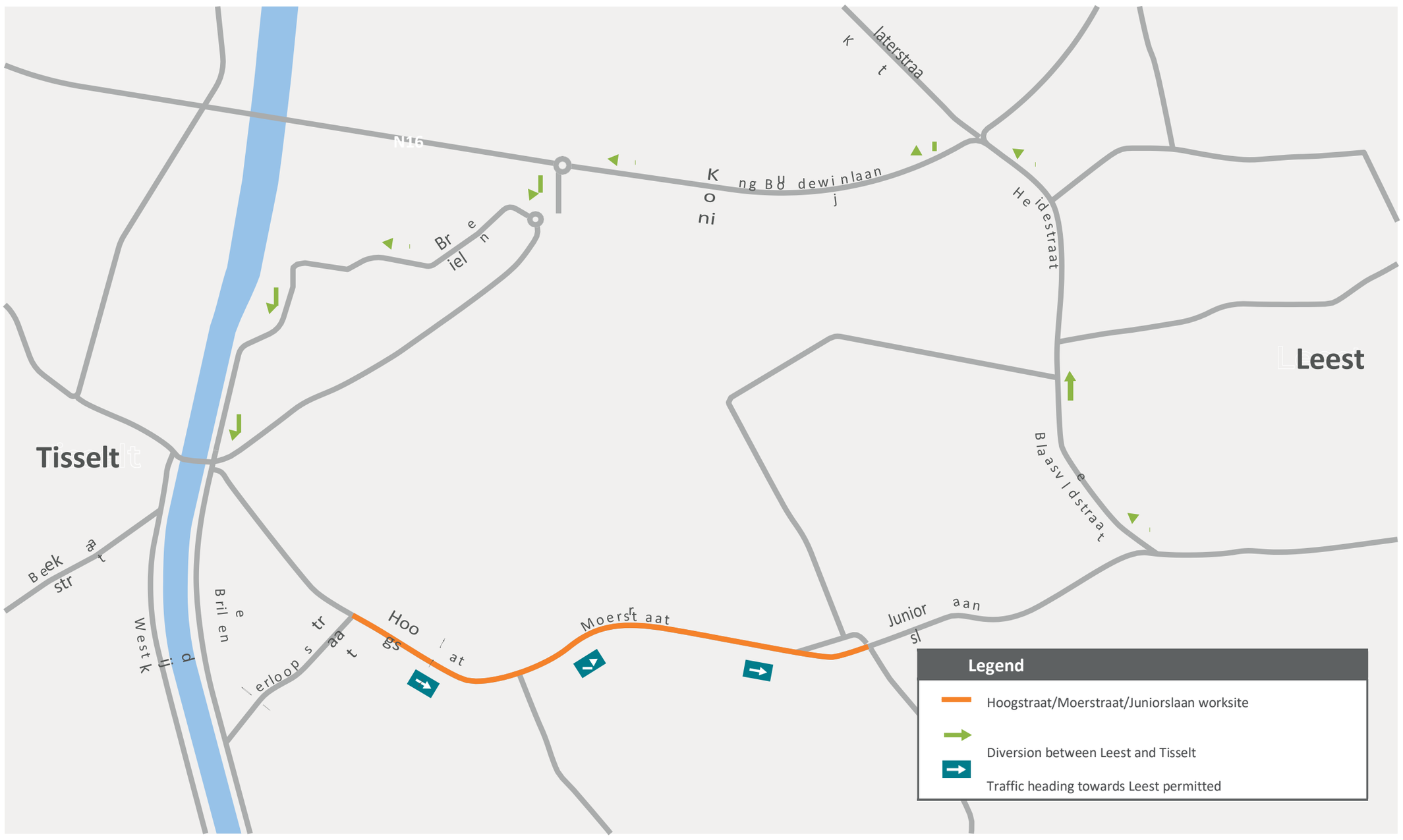
elia | lia Group

Traffic diversion during work on Hoogstraat/Moerstraat/Juniorslaan

- **Only through traffic heading towards Leest will be permitted** during work on **Hoogstraat, Moerstraat and Juniorslaan.**

- **Traffic between Leest and Tisselt** will be diverted via Blaasveldstraat, Koning Boudewijnlaan and Brielen.

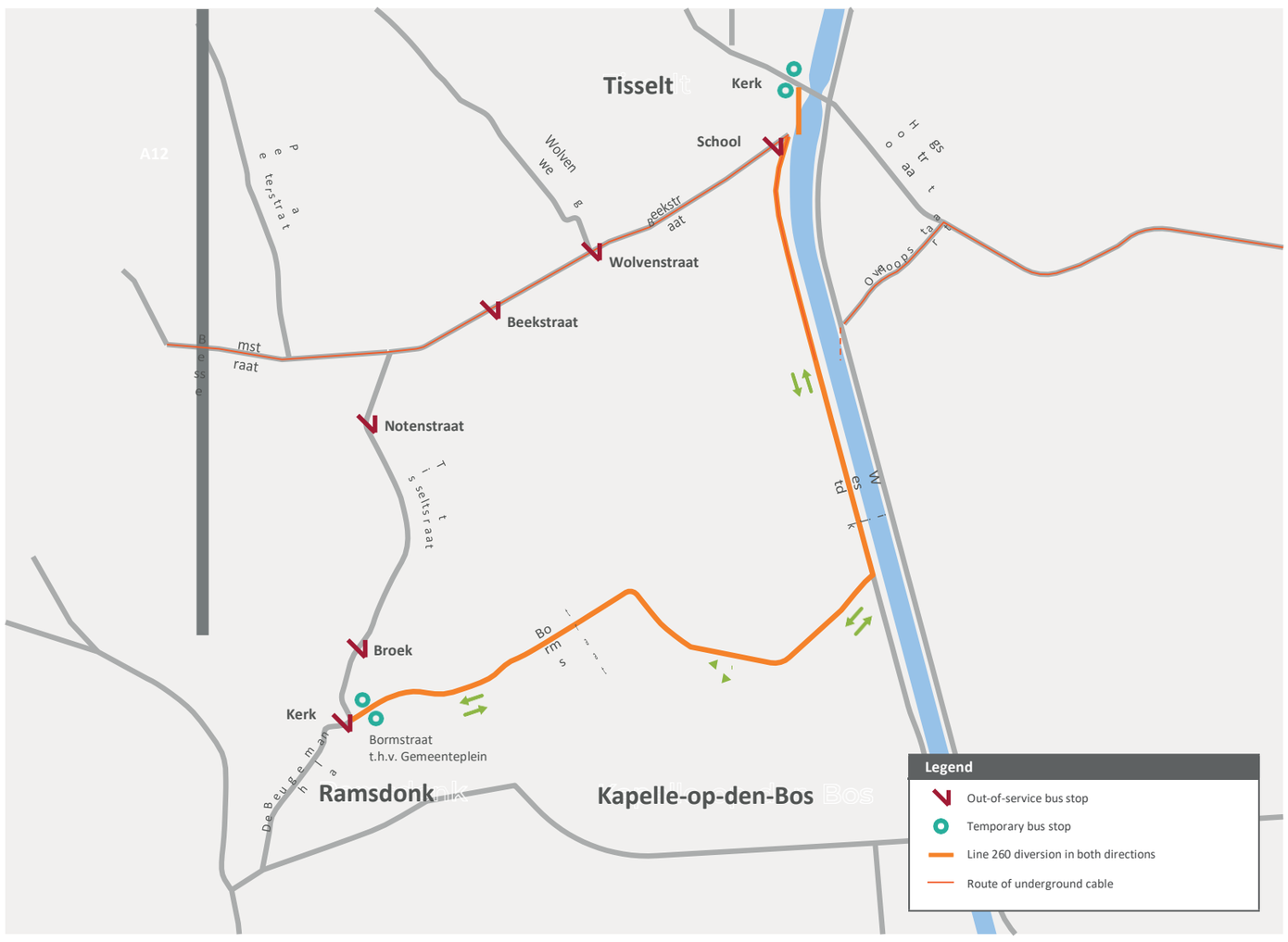
- There will be a **separate path for pedestrians** next to the worksite.



elia
| lia Group

Diversion of bus line 260

A diversion will be in place for bus line 260 from Monday, 16 March 2020 up to and including Friday, 8 May 2020, meaning that De Lijn will be unable to serve certain bus stops on the current route.



Out-of-service bus stops

- **In Tisselt:** Wolvenstraat, School
- **In Ramsdonk:** Kerk, Broek, Notenstraat, Beekstraat

Temporary bus stops

- **In Tisselt:** Kerk (in both directions)
- **In Ramsdonk:** Bormstraat at the intersection with Gemeenteplein (in both directions)

More information about changes to bus timetables can be found at www.delijn.be

elia
lia Group

Diversion of bus line 289

A diversion will be in place for bus line 289 from Monday 24, February 2020 up to and including Friday, 10 July 2020, meaning that De Lijn will be unable to serve certain bus stops on the current route.

Out-of-service bus stops

- ✕ **In Tisselt:** Kerk (towards Mechelen), Kapelleke (in both directions), Valkstraat (in both directions)
- ✕ **In Leest:** Van Praet (in both directions), Weg naar Blaasveld (in both directions)

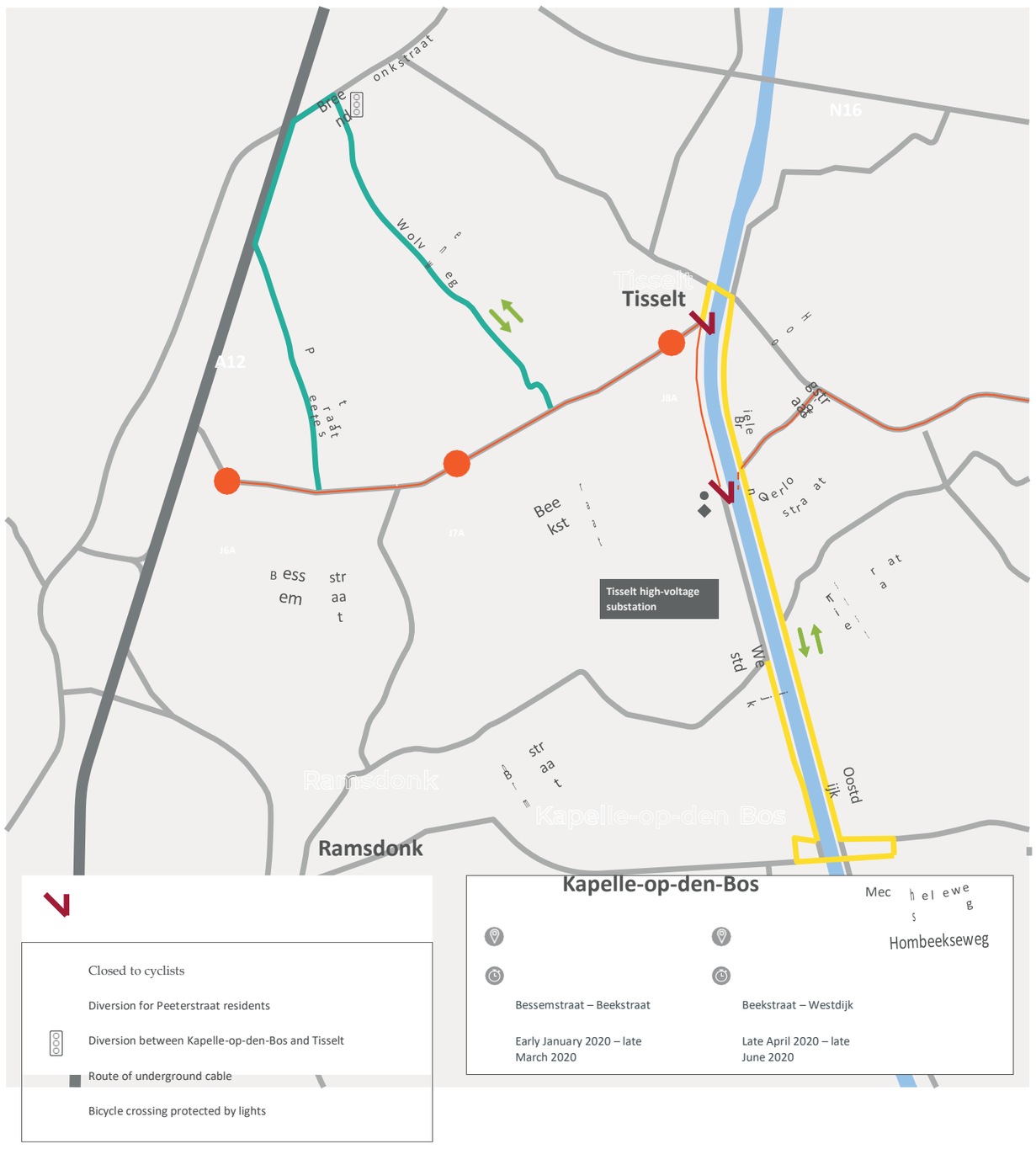
Temporary bus stops

- **In Tisselt:** Brielen (towards Mechelen)
- **In Leest:** Blaasveldstraat at the intersection with Juniorslaan (in both directions)

More information about changes to bus timetables can be found at www.delijn.be

elia | lia Group

Diversion for cyclists



During work on Bessemstraat (J6A – J7A)

- Diversion via cycle path along A12, Breendonkstraat and Wolvenweg

During work on Westdijk (J8A – Tisselt high-voltage substation)

- Westdijk cycle path completely closed between Tisselt and Kapelle-op-den-Bos

- Diversion via Tisselt bridge or Verbindingsweg and along the canal via Brielen

elia | lia Group

Seven measures to minimise disruption

Elia is taking a number of measures to minimise the disruption caused by its work:

1. Elia **will restore land** to its original state once work is complete.

2. Elia prefers to set up **work depots** in existing **industrial zones** or **paved areas** to limit disruption to the environment and nature.

3. Elia assures local residents that they will **always be able to access their homes**.

4. **Work will not be performed during the night**, so there will be no depots or sites lit up at night-time.

5. Site traffic uses the **shortest, safest and most accessible routes**.

6. Elia uses **wood portals or cranes** when removing or pulling **cables** close to railways, roads or other key infrastructure with a view to minimising the impact on the surrounding area.

7. If normal traffic has to be **diverted**, the diversions will be agreed with the road authority (the municipality or the Flemish Region) and **clearly communicated** to local residents.

Any ideas about how our work could be less disruptive for you as a local resident? Feel free to pass on suggestions to Elia employees on site or send them via email to **omwonenden@elia.be**.

elia
Elia Group