



Service Definition

G-Cloud 15



Overview

QRoutes is the UK's market-leading strategic transport planning and optimisation tool for home-to-school transport. It manages the complexities of SEND transport by design, incorporating accessibility requirements, passenger compatibility, safeguarding constraints and specialist vehicle needs into its network-wide planning and scenario modelling. QRoutes also has specific functionality to meet the needs of Mainstream transport.

Over 60 local authorities use QRoutes to design, test and commission transport at scale.





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Delivering strategic impact



Delivering strategic value

Enabling sustainable SEND and mainstream school transport through evidence-based planning and commissioning. De-risk route planning and find savings of up to 20% compared to other optimisation products

Sustained cost control and best value

Optimise transport provision to reduce single occupancy vehicles and cut unnecessary mileage.

Simpler, stronger procurement

Generate tender-ready route specifications, support smarter market engagement and enable benchmarking of operator pricing for proven cost savings.

Informed, strategic decision-making

Model the financial and service impacts of planning decisions - such as ride time thresholds, sharing strategies, and fleet mix - before commitments are made.

Transparency and governance

View structured data outputs and comparable metrics that can be used for reviews and reporting.

Sustainability alignment

Reduce avoidable mileage and estimate CO₂ emissions to support local authority carbon reduction initiatives such as Net Zero.



Examples of savings achieved at UK local authorities

Barnsley Metropolitan Borough Council - SEND cost control

Barnsley experienced a **68% increase in pupils requiring SEND transport** between 2015 and 2024, with further growth forecast and extended statutory responsibility to age 25. The authority adopted QRoutes to improve planning efficiency, optimise routes and strengthen contract management.

Using QRoutes, the team identified approximately **£100k of savings** by optimising routes at its largest school and a further **~£13k annual saving** by combining seven single-occupancy taxi

journeys. Planning efficiency improved and pressure on staff ahead of the new school year reduced.

These improvements enabled the authority to maintain control of SEND transport growth, improve route stability through the academic year and strengthen confidence in future capacity and cost planning.



Wiltshire Council

Examples of savings achieved at UK local authorities

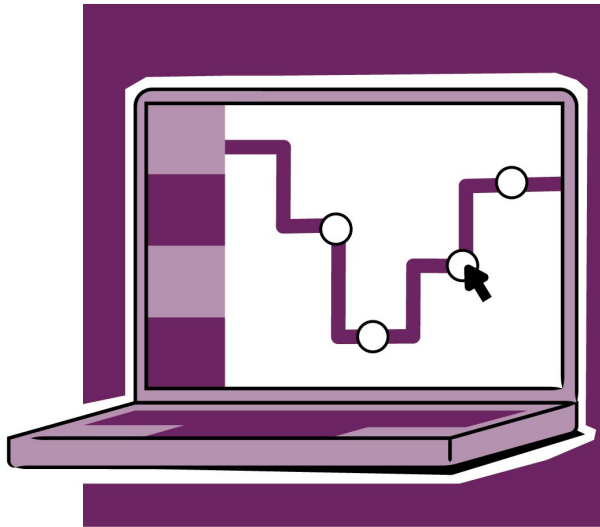
Wiltshire Council - Strategic support

Wiltshire needed to select the optimal site for a new **£20m special needs school**, with transport identified as the largest ongoing cost and a key governance risk.

The team used QRoutes to model transport scenarios across multiple potential sites. They evaluated route timings, distances and cost implications at scale, enabling objective comparison and supporting stakeholder engagement.

“We were amazed by the accuracy of the route timings. **This gave us confidence in our reporting which would be subject to considerable legal and reputational challenge,**” said the SEND and Passenger Assistant Manager.

The selected site has since been approved, with high confidence in the evidence supporting the decision.





Examples of savings achieved at UK local authorities

Hertfordshire County Council - network-scale optimisation

Hertfordshire reviewed home-to-school **transport across approx 655 pupils and 249 routes**, with SEND provision frequently defaulting to taxi services due to planning complexity. Using QRoutes Vantage, the authority planned pupils across multiple schools together, enabling network level optimisation rather than routing schools separately.

The council reduced routes and fleet requirements by **over 25% (63 routes removed)** and achieved an estimated

one-third reduction in transport costs across the academic year.

Contract management was simplified, operator competitiveness improved, and appropriate shared provision increased for SEND pupils. The redesigned network improved financial sustainability while maintaining safety, suitability, and quality.

**'Not all
suppliers are
created equal.'**



Eleanor Grieve
Performance Review and Systems Officer
Scottish Borders Council

**'Route timings
are robust which
gave us the
confidence to
maximise
occupancy.'**



Roger Haworth
Swindon Borough Council

**'Enjoyable to use
and savings at
pretty much
every school.'**



Ian Fraser
Strategic Lead Children's Transport
Milton Keynes City Council



Features



Automated route planning

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Automated route planning to a common destination Batch schedule multiple trips to a single destination in minutes. Replan rapidly as requirements change and evaluate alternative scenarios throughout the year.	✓	✓	✓
Automated multiple-destination routing Share transport between several nearby destinations to identify the potential for greater savings.	Unlimited	5 schools	—
Automated sequential scheduling Prioritise scheduling based on school size or passenger priorities e.g. schedule wheelchair users first.	✓	✓	—
Automated roll-over Automatically remove leavers and assign new passengers to existing routes.	✓	✓	—
Automated reverse solutions Generate the return journeys automatically, reducing manual effort.	✓	✓	—



Automated route planning

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Manual amends Amend routes by manually overriding automatic decisions.	✓	✓	✓
See impact of changes See the impact on route time and distance following manual changes (or automated rescheduling) to compare efficiency before and after.	✓	✓	✓
Add new passenger Add a new passenger to the most suitable existing route. Automatically identifies route options for a new trip. Results lists all options in priority order with mileage and time impact, along with position within that route, so that planners can make informed choices.	✓	✓	✓
Calibrate road speeds Admin users can use real-world run times to calibrate road speeds for realistic traffic conditions for peak and off-peak conditions.	✓	✓	✓



Route management

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Running order of routes Automatically optimise order of routes to improve efficiency or manually change the order using drag and drop.	✓	✓	✓
Ordnance Survey The user can view all routes on Ordnance Survey maps	✓	✓	✓
Add waypoints Manually adjust routes, e.g., to avoid busy junctions or low height bridges)	✓	✓	✓
Remove U-Turns Identify U-Turns and automatically apply waypoints to remove them	✓	✓	—



Fleets and Vehicles

Vehicle types and fleets

Build fleets from a combination of vehicles, either generic types or specific vehicles.

Vehicle layouts

Configure multiple internal layouts and QRoutes will evaluate the various options when scheduling.

Depots

Include distance to and from depots in the route optimisation.

QRoutes
Vantage

QRoutes
Pro

QRoutes
Lite





Pickup points

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Stop definition, editing, and management Create and manage pick-up points for multiple passengers, including existing customer-defined stops and existing public transport bus stops.	✓	✓	—
Walking paths See walking routes and distances to and from destinations or pick up points. Walking route calculations use Ordnance Survey's Paths dataset.	✓	✓	—
Automated bus stop management Identify the best stops to use for the given cohort and automatically assign passengers to them. Limit the number of passengers assigned to each stop to prevent over-crowding.	✓	✓	—



Passenger needs

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Passenger profiles and vehicle requirements Take account of individual mobility, seating and equipment requirements to ensure appropriate vehicle allocation and avoid unnecessary use of specialist or high-cost vehicles.	✓	✓	✓
Compatibility and safe sharing rules Define which passengers can and cannot travel together, supporting safe, appropriate sharing that improves vehicle utilisation while maintaining safeguarding standards.	✓	✓	—
Passenger assistants and care continuity Model the impact of passenger assistants, multiple pick-ups and care requirements within route design, enabling realistic cost forecasting and operational planning.	✓	✓	—
SEND-specific scenario modelling Test the cost and capacity impact of policy decisions such as ride time limits, school sharing and vehicle allocation before committing to long-term provision.	✓	—	—



Roadworks and access only areas

Roadworks

See upcoming roadworks and which routes will be affected.

Automated notifications of roadworks

Receive email alerts of when routes will be affected by roadworks for proactive communication with stakeholders.

Visualise access-only areas

See when routes enter access-only areas (e.g., Low Emission Zones, School Streets or Low Traffic Neighbourhoods).

Avoid access-only areas

Avoid routing through access-only areas while allowing access when required to drop off or pick up a passenger.

QRoutes
Vantage

QRoutes
Pro

QRoutes
Lite



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Reports

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Configurable route reports (itineraries) Download detailed route reports with the appropriate level of information according to purpose, e.g., addresses with mileage for tenders, with names and individual notes for passenger assistants and drivers, with or without maps.	✓	✓	✓
Vehicle file Download a csv report of vehicles used for the routes.	✓	✓	✓
Route export Easily transfer route traces between systems by exporting routes in KML, GeoJSON, or GTFS, e.g., to publish Mainstream routes on a public facing website.	✓	✓	—



Whole network scenario planning

Schedule your whole transport provision at once

Automatically identify opportunities to safely share provision between schools, taking account of start and finish times, passenger constraints and vehicle availability.

Strategic decision support

Support procurement, budget planning and route design by providing consistent metrics for comparing scenarios. Reduce historic assumptions by enabling evidence-based evaluation of network change.

QRoutes
Vantage

QRoutes
Pro

QRoutes
Lite



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Track cost changes

QRoutes Vantage	QRoutes Pro	QRoutes Lite
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View changes in provision over time

See how transport requirements and costs have changed over time in Dashboard. See accurate per-mile costs, based on QRoutes’ mapping data.

✓	—	—
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Identify discrepancies for investigation

Track operator costs against passengers carried. Add free text comments for easier communication within the team as you negotiate with operators to resolve cost issues.

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Target areas for improvement

Rank routes, schools and operators by cost. Per-mile costs based on QRoutes’ accurate mapping data allow for fair comparisons.

✓	—	—
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Net zero and carbon reduction

	QRoutes Vantage	QRoutes Pro	QRoutes Lite
Vehicle based emissions modelling Calculate carbon emissions using configurable CO ₂ values per vehicle type, enabling accurate comparison between diesel, hybrid and electric fleet options.		—	—
Report on CO₂ Emissions data is available through route-level summaries, solution reporting and analysis exports, supporting network-wide assessment.		—	—



Data management, security, & GDPR



Data import, export, and management

Client journeys (csv)

Upload client journey requirements in the QRoutes csv format and download planned route results in the same file format.

Vehicle requirements (csv)

Download the vehicles needed to deliver a solution in a separate csv file.

API integrations

A REST API provides all the major functionality, enabling integrations with other software products or customers' own systems.

Address validation

Clean and geocode addresses in seconds using Ordnance Survey's AddressBase.

Route details (KML, GeoJSON, GTFS)

Route information (roads taken, pick-up points, times etc) for display in other GIS*.

*GIS – Geographic Information System



Data protection and GDPR

- QRoutes processes individual journey requirements for passengers and passenger assistants to produce transport plans.
- Journey requirements may include the following personal information:
 - First and Last Name
 - Special mobility requirements (e.g. wheelchair use)
 - Address (e.g. House Name, House Number, Street, Locality, Town, County, Postcode)
- When a user session ends, QRoutes deletes the data associated with the session. Account settings, such as vehicle layouts and map calibration, are stored. Some features require persistent storage to save and retrieve data. These features are only enabled upon request from the contracting authority's representative. See Schedule 2 of our Standard Terms and Conditions for more detail.
- QRoutes Standard Terms & Conditions detail the purpose and duration of any personal data processing and how the company fulfils its data protection obligations.



Security

- QRoutes' products are all hosted in ISO 27001 accredited data centres in the UK (provided by iomart, www.iomart.com and Microsoft Azure, www.azure.com). Data in transit between the planner's computer and the QRoutes application is protected by Transport Layer Security (TLS) version 1.2 or greater.
- QRoutes procures external penetration testing of all of its applications at least yearly.
- QRoutes is accessed via a login page available on the groutes.co.uk website. It works with most modern web browsers, e.g. Edge, Chrome, Firefox and Safari.
- Access to the application is via username and password, with optional 2-factor authentication.
- Password policy is configurable by each customer. Login via Entra ID is also available.



**Working
together**



Supporting you

Training

QRoutes subscriptions include training, normally remote. Training can be onsite at the customer's request (although there is an additional charge for this).

Initial training is typically split into 3 sessions:

1. General overview of the range and breadth of QRoutes functionality.
2. Account configuration with the customer's one or two appointed QRoutes Administrators.
3. Workshop-style training in which users practise processing some of the customer's own data.

Bugs & feedback

Users are encouraged to submit bug reports, issues and feature requests through the in-application help or via email to support@qroutes.co.uk.

Events

QRoutes carries out regular events open to our customers, allowing you to meet with other local authority teams and share best practices in school transport.





Service

- QRoutes uses commercially reasonable endeavours to make the services available to users at qroutes.co.uk 24 hours a day, seven days a week, except for planned maintenance carried out between 10pm to 2am UK time and notified in advance.
- QRoutes maintains a dedicated Disaster Recovery server in a different data centre to its main server. It can be up-and-running within one hour, if needed.

Support requests are categorised as follows:

Level	Severity	Description	Fix time
1	Critical	• Service is down • Critical business process or component failure	4 hours
2	Urgent	• Service is severely degraded • Urgent business process is unable to proceed	1 day
3	High	• Service is impaired • Important business processes are impaired	7 days
4	Normal	• Normal service continues • Little or no business impact	1 month
5	Low	• No service impact • Fix to be applied at a mutually agreed date	Next release



Off-boarding

- Should a customer end a subscription, QRoutes maintains the customer's account, with its settings, for a further 9 months. The audit logs remain available during this time.
- 9 months after the subscription ends, the account, including all settings and logs, is permanently deleted.

Author	Date	Comment	Status
John Doe	10/07/2025 14:19	One passenger has moved off the route - price needs review with operator	Needs review
Jane Smith	12/07/2025 11:57	Renegotiated with operator - cost to reduce from next month	COMPLETE



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