**Explanation of fuel types available on the RM3801 Framework**

**Gas Oil A2**

(Heating Oil)

* Ultra-Low Sulphur Gas Oil
* ULSG
* Gas Oil 35
* 35 Second Oil
* Red Diesel
* Number 2/3 Fuel Oil

Used for all inland applications: Site Vehicles, tractors, bulldozers, gritters - non road vehicles. And use in static electricity generation or heating.

Effectively the standard gas oil, available from all terminals and distribution depots.

Can only contain up to 10 ppm Sulphur

Can contain up to 7% BioDiesel.

Priced from Diesel Platts.

**Kerosene**

(Heating Oil)

* Paraffin
* Class C2
* Class C1 / PBO
* 28 Second Oil
* Regular Burning Oil
* Number 1 fuel oil
* Kero

Kerosene is used for domestic heating in the UK because it does not carry duty and so is cheaper than gasoil, unlike Europe. It contains up to 1000 ppm sulphur and so is more polluting than Class A2 gasoil.

It is used in jet-engine aircraft as well as heating systems C1 is premium paraffin or premium burning oil (PBO). It has lower sulphur content than regular kerosene (400 ppm) and is used for paraffin heaters and lighter fluid.

Typically stored in blue or blue-labelled container

Priced from Platts.

**Gas Oil Class D**

(Heating Oil)

* High Sulphur Gas Oil
* Gas Oil 0.1%
* Class D
* 1000ppm Oil

Gas Oil Class D cannot be used in off road mobile plant but can be used inland in stationary generators and heating applications such as boilers.

Contains up to 1000 ppm Sulphur

Much harder to come by than Class A2 and is generally only available where there is a demand for marine gas oil.

Priced from Platts.

**Light Fuel Oil**

(Heating Oil)

* LFO
* Number 4 Fuel Oil
* Class E

Residual fuel oils or "black oils" which are blended from the residue which remains from the crude oil after the distillates and lighter products have been removed. Residual fuels are primarily used in industrial boilers and other direct heating applications (e.g. blast furnaces) and as a marine fuel where sulphur limits allow.

Classified according to viscosity. The fuel oil composition depends on the origin of the crude oil as well as on the refining process it results from.

Does not require a pre-heating.

Priced from blend of Gas Oil A2 + HFO Platts as per MFO.

**Medium Fuel Oil**

(Heating Oil)

* MFO
* Number 5 Fuel Oil
* Class F

Residual fuel oils or "black oils" which are blended from the residue which remains from the crude oil after the distillates and lighter products have been removed. Residual fuels are primarily used in industrial boilers and other direct heating applications (e.g. blast furnaces) and as a marine fuel where sulphur limits allow.

Classified according to viscosity. The fuel oil composition depends on the origin of the crude oil as well as on the refining process it results from.

May require pre-heating, but not storage heating.

Priced from 15% Gas Oil A2 + 85% HFO Platts.

**Heavy Fuel Oil**

(Heating Oil)

* Heavy Fuel Oil (HFO)
* Fuel Oil 1%
* Residual Fuel Oil (RFO)
* Furnace Fuel Oil (FFO)
* Number 6 Fuel Oil
* HFO
* Class G

Residual fuel oils or "black oils" which are blended from the residue which remains from the crude oil after the distillates and lighter products have been removed. Residual fuels are primarily used in industrial boilers and other direct heating applications (e.g. blast furnaces) and as a marine fuel where sulphur limits allow.

Classified according to viscosity. The fuel oil composition depends on the origin of the crude oil as well as on the refining process it results from.

Requires storage heating and pre-heater in order to use.

Priced from Platts.

**BioDiesel**

(Heating Oil/ Automotive Fuel)

* B8 - B100
* Standard (B100): EN14214
* Biofuel
* CHP Fuel

With Renewable Energy Directive there is an increasing demand for bio-fuels. Biodiesel is a blend of mineral diesel with Fatty Acid Methyl Ester (FAME) produced from plant oils, used cooking oil or tallow in any percentage as represented by B#

B100 is used in some combined heat and power plants (CHP).

Priced from Diesel Platts.

**Petrol**

(Automotive Fuel)

* Petroleum
* Gasoline
* Ultra-Low Sulphur Gasoline
* ULSG
* Unleaded
* Standard: EN228
* ULSP

Obtained from crude oil refining, differing from similar fuels by molecular weight. This defines physical properties including viscosity and flash point, in turn affecting usage.

10 ppm Sulphur

Used in Spark ignition engines in cars, motorbikes, light aircraft, outboard motors, chainsaws, strimmer’s, lawn mowers etc.

Lead was used as an additive to improve efficiency. Lead replacement petrol (LRP) is available for old vehicles

Priced from Platts.

**Diesel**

(Automotive Fuel)

* Road Diesel
* White Diesel
* Ultra-Low Sulphur Diesel
* ULSD
* Diesel-engine road vehicle
* DERV
* Standard: EN590

Obtained from crude oil refining, differing from similar fuels by molecular weight. This defines physical properties including viscosity and flash point, in turn affecting usage.

10 ppm Sulphur

Used in Compression ignition engines in cars, buses and trucks.

Contains more energy per litre than petrol and has a more efficient combustion process meaning higher fuel efficiency and lower CO2 emissions.

Can contain up to 7% BioDiesel.

Priced from Platts.

**BioDiesel**

(Automotive)

* B8 - B100
* Standard (B100): EN14214

With Renewable Energy Directive there is an increasing demand for bio-fuels. Biodiesel is a blend of mineral diesel with Fatty Acid Methyl Ester (FAME) produced from plant oils, used cooking oil or tallow.

Biodiesel has a "shelf-life" where Diesel does not, and will also initially cause filters in vehicles to clog more frequently, and there are concerns over gelling at very low temperatures. Because there is no standard profile for a blended product engine manufacturers are not presently willing to warranty their engines. This is causing delays in the adoption of the fuel. Benefits include the recycling of waste oil and increased carbon neutrality. TFL is currently under the directive to convert its fleet to B20 in coming years.

Priced from Diesel Platts

**Bio-ethanol**

(Automotive)

* Standard EN15736

Bio-ethanol is produced through fermentation of sugar or starch in crops such as beet, sugar cane and wheat to produce pure ethanol which can be blended with petrol in quantities up to 5% without engine modification. It contains more oxygen than petrol and therefore burns more cleanly.

Priced from Platts.

**AdBlue**

(Alternative Products)

AdBlue is commonly referred to as Diesel Exhaust Fluid (DEF) and is standardised as ISO 22241. AdBlue is Urea Solution made up of 32.5% high-purity urea and 67.5% de-ionised water. It is used to lower nitrous oxide that is omitted from Diesel engines exhausts. AdBlue reacts with Nitrous Oxides (NOx) absorbing the harmful elements, therefore producing lower emissions.

Available in:

* 20L containers
* 200 L Barrels
* 1000 L IBC's
* Bulk delivery

Not priced from Platts. Priced by supplier as per manufacture/supply.

Other Additives Other less common additives and fuels may be covered and specific arrangements can be made with the liquid fuels team.

**Marine Oil**

* Marine Gas Oil
* MGO
* Class DMA

1000 ppm sulphur gas oil and can be used in all marine applications. It does not usually meet either Class A2 or Class D and is generally not suitable for inland use.

Typically used by Ferry’s and Commercial ships. Smaller vessels will likely use more regular fuels due to availability, sulphur profile and lack of specialist equipment.

Priced from Gas Oil Class D Platts.

**Heating Oil Substitute to BS: 2869**

(Heating Oil)

Common Brands:

* Prima 35
* Furnace Flame
* Green Flame
* Ultra 35

These alternative fuels are intended solely as a replacement for Heating Oil and cannot be used in vehicular combustion engines. The fuels are blended to meet Class D Heating oil spec, except for cetane (only relevant in engine applications) and will operate just as well as a standard gas oil in any existing standard gas oil burning application. Although fuels meet the British Standards for Gas Oil, in terms of HMRC and the Hydrocarbon Oil excise Duty Act (HODA) they meet the Kerosene requirements. This means that there is no duty on these fuels, leading to a saving which can be passed on to the customer.

Priced from Gas Oil Platts. This includes Gas Oil duty, and as such you may encounter a negative supplier margin because they would still incur a profit.

**Gas to Liquid**

(Automotive)

* GTL

Gas to Liquid is an alternative fuel used in diesel engine vehicles. GTL is seen as a premium product and is used to reduce the emissions commonly produced by diesel engines.

Benefits:

* Fuel can directly replace diesel without converting the engine
* High cetane number helps engine ignition in colder weather
* Noise levels reduced
* Reduced emissions

There are alternative products available on the market used to reduce diesel emissions.

**Please note, Framework users are not limited to the products listed in this document. As and when new products come to market they can be added to the framework.**